PTO-1590 (8-01)

SEARCH REQUEST FORM

Scientific and Technical Information Center

	Please provide a detailed statement Include the elected species or structurality of the invention. Define an	ictures, keywords, synony	ms, acronyms, and special meaning. G	registry numbers, and co-	mhine with the concern -	
٠	kilowii. Flease attach a copy of th	e cover sheet, pertinent c	laims, and abstract.		. ,	
	Title of Invention: Zexp	Dression of	Foreign ge	ues from pla	int virus Ver	to
	Inventors (please provide full na	ames): Sinon	Santa - Cr	uz epal.		
	Earliest Priority Filing Date:	1/1/2001		•		
	For Sequence Searches Only Plea appropriate serial number.					
	Please sea	rd SERIO.	NO: 1 , 0	und also di		v. Ca
	search		الم	70.	e a precessor	nee
			61	790	•	
	•			1		
		•				
		•			,	
				**	•••	
٠,				,		
	-NA			Edward Hart Technicai Info. STIC/Biotech CMI 6B02 Tel		
	1-188					
	1-180					
	<i>t</i>					
	·					
	· .	1177				
\$	STAFF USE ONLY	Type of Search	******	**************************************	*****	rı .
	earcher:	NA Sequence (#)	1-1 STN_	Vendors and cost where	аррисаые	
s	earcher Phone #:	AA Sequence (#)	Dialog			
s	earcher Location:	Structure (#)	Questel/Or	bit		
D	ate Searcher Picked Up: 2/3/	Bibliographic	Dr.Link			() }
D	rate Completed:	D D Litigation	Lexis/Nexi	s		
				_ ,		3

BEST AVAILABLE COPY

Title: Perfect score: Sequence:

US-09-758-962-1 188

1 gtcgacggtatcgataagct.....gaagaaagagctcaccatgg 188

Scoring table:

OLIGO_NUC Gapop 60.0 , Gapext 60.0

2054640 seqs, 14551402878 residues

Total number of hits satisfying chosen parameters:

4109280

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Word size : Searched: OM nucleic - nucleic search, using sw model

GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

Run on:

February 19, 2003, 06:08:11; Search time 2601 Seconds (without alignments) 2103.548 Million cell updates/sec

```
Post-processing: Listing first 45 summaries
Pred. No. is the number of results predicted by chance to have a
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                              gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                     jb_pat:*
                                                                                                                                                                                                                                                                                                                     gb_sts:*
gb_sy:*
gb_un:*
                                                                                                                                                                                                                                                                                                                                                                                                         D_0V:*
                                                                                                                   em_htg_hum: *
em_htg_inv: *
em_htg_other: *
                                                                           em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
                                                                                                                                                                                                                        em_ov:*
                                                                                                                                                                                                                                                                   em_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                     _om: *
                                                                                                                                                                                                               em_pat:*
                                                                                                                                                                                                                                      em_or:*
                                                                                                                                                                                                                                               em_om:*
                                                                                                                                                                        em_sts:*
                                                       em_htg_vrt:*
em_sy:*
                                                                                                                                                            em_un:*
                        em_htgo_other:*
                                  em_htgo_hum: *
em_htgo_mus: *
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

NO.	re		37 537	4 868		68164
ب	4.	79.3	1537 1 6312 1	4 S68164	ď.	29370
טנ	149	2 2	311		7	
u a	38.		1568 1	L4 MDV		AR067739
υı .		18.	2126	ARUK		AR096004
σ (18	126	6 AR096004		AR116595
7		18	2126	6 ARI	- •	AR121154
œ		18	2126	b AKL	-	
9		18	7560	5 0	5	
10		18	110	TO ABO	t	Z47159 Calothrix
		18	ь ш 5 00	. C		16087
		18	3 L 2 C 2 C	11		G01691
c 13		. 18	307	<u> </u>	20	7173
			187	4 + E (63;	7850
15		100	741	י עכ		64
16		9 0	759	0		4 c
18		18.	924	6 A5987	•	
19		18.	924	8		AJ011383
20			1043	8 CARULIS	200	
21		18.	1097	۰ α	۲	E14788 c
22		18.	1181	. G	0	X55499
		. 12	1771	10 PY3046	51	AX30465
c 24		18.	1219	6 E37094	•	E37094 GABA BP
			1438	9 AB0677	4	AB06777
26			1464	ο,	9	AX28668
			16591	6 AR1070	A	AR10706
c 28		18.	1000	ס ע	2	AR13673
		10.	8591	ъ (4	ARI 6924
		10.	1680	5 XLU09632	32	The specific colors are the second and the second are the second a
			1845	œ	16	#50000#
א עני א		18.	1889	σ	43	200704
			1958	6 A94995		X02
35		ш	1958	·σ	34	E38366
36		_	1958	٠ م		E39010
37			8561	0	3 7 7	АJ40135
38		. ب	000 C	0 0	355	AJ40135
39		1 2	1110	o 0	65	АJ0002
c 40			7.17	- 0	03	AB0511
c 41		1 2 3	7117	n .≠	24	AR0924
4		۰.	2100	ه د	039	AJ2920
Α.			44T7	6 AR050076	76	AR050076
		10.1	2200			ABOUS

ALIGNMENTS

TITLE	REFERENCE	ORGANISM	KEYWORDS	ACCESSION VERSION	S68164 LOCUS DEFINITION	RESULT 1
Atabekov, I.G. Tobamovirus of cruciferous plants: nucleotide sequence of genes of	1 (bases 1 to 1537) Dorokhov, Iu.L., Ivanov, P.A., Novikov, V.K., Yefimov, V.A. and	Tobamovirus Viruses; ssRNA positive-strand viruses, no DNA stage.	Tobamovirus host: cruciferous plants.	\$68164 \$68164.1 GI:544600	S68164 protein, capsid protein [Tobamovirus, host: cruciferous transport protein, capsid protein [Tobamovirus, host: cruciferous plants, Genomic, 1537 nt].	

TITLE

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                          . 8
                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
 REFERENCE
                                                                                                                                                              DEFINITION
                                                                                                                                                                                               TMVRPTPCP
                                                                                                                          ACCESSION
                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                  RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                      801
                                                                                                                                                                                                                                                                                                                                           741
                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                681
                                                                                                                                                                                                                                                                                                                                                                            87
                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                     CGAATTCGTCGATTCGGTTGCAGCATTTAAAGCGGTTGACAACTTTAAAAGAAGGAAAAA 86
                                                                                                                                                                                                                                                                    TCCTGATTCGTTTAATTTGAAAGAAGAAA
                                                                                                                                                                                                                                                                                                    TCCTGATTCGTTTAATTTGAAAGAAGAAA 175
                                                                                                                                                                                                                                                                                                                                                                                                            CGAATTCGTCGATTCGGTTGCAGCATTTAAAGCGGTTGACAACTTTAAAAGAAGGAAAAA 740
                                                                                                                                    TMVRPTPCP 6312 bp RNA lines Tobacco mosaic virus (Crucifer) genomic RNA for polymerase; 122K protein; transport protein and
                               Tobacco mosaic virus
                                                127K protein; coat protein; RNA helicase; polymerase; transport protein.
Tobacco mosaic virus.
                                                                                                        Z29370.1 GI:488713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenBank staff at the National Library of Medicine created this entry [NCBI gibbsq 142918] from the original journal article. This sequence comes from Fig. 2.
                  Viruses; ssRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transport protein, capsid protein, and 3'-terminal untranslated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Akad. Nauk. 332 (4), 518-522 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Translation="MSYNITNPNQYQYFAAVWAEPIPMLNQCISALSQSYQTQAARDT VRQQFSNLLSAVVAEQQRFPEGSRVVVNSAVIKPLYEALMKSFDTRNRIIETEEESR PSASEVLTRHNVLMMRPEPLEVKFSCC"

274 c 406 g 433 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="capsid protein" 830. .1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ESETICDIDLLINVPLDKYRYVGIIGAVFTGEWLVPDFVKGGVTISVIDKRLANSKEC
VIGTYRAAAKKREGYEKLVPNIFVSTVDAKRKEWQVHTRIQDLKALGWOPLALEVVS
VAMYINNVVNKGLREKVVAINDPUSGFEGVVDEFVDSVAAFKAVDNERRRKKKVEEK
VAMYINNFYNKEREKVAGPDSFNLKEENVLOHYKPESVPVFRSGVGRAHSDA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="capsid protein"
/protein_id="AAB29320.1"
/db_xref="GI:544602"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="transport protein"
/protein_id="AAB29319.1"
/db_xref="GI:544601"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="This sequence comes from Fig. 2; Protein sequence
is in conflict with the conceptual translation;
mismatch(95[R.>G])"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene-"capsid protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Tobamovirus"
/db_xref="taxon:12234"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note="This sequence comes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'gene≖"transport protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              translation-"MSIVSYEPKVSDFLNLSKKEEILPKALTRLKTVSISTKDIISVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene="transport protein'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79.3%;
positive-strand viruses,
6311)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 149; DB 14;
Pred. No. 1.6e-74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fig. 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1537;
                                                                                   RNA-dependent RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
             DNA stage; Tobamovirus
                                                                                                                                                                             linear
                                                                                                                                       coat protein
                                                                                                                                                          RNA-dependent RNA
                                                                                                                                                                         VRL 16-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 (bases 1 to 6312)
Dorokhov,Y.L., Ivanov,P.A., Novikov,V.K., Efimov,V.A.,
Atabekov,I.G., Efimov,V.A., Casper,R. and Atabekov,J.G.
obamovirus of the Cruciferae family: nucleotide sequence of the
5'-untranslated region and nonstructural protein genes controlling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Belenovich, E., Generozov, E., Novikov, V. and Zavriev, S. Properties and the genome structure of the K2 strain c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         replication viral genome Dokl. Akad. Nauk SSSR 335,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dorokhov,Yu.L., Ivanov,P.A., Novikov,V.K., Agranovsky,A.A., Morozov,S.Yu., Efimov,V.A., Casper,R. and Atabekov,J.G. Complete nucleotide sequence and genome organization of a tobamovirus infecting cruciferae plants PEBS Lett. 350 (1), 5-8 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Moscow State University, Mos
revised by author 15-MAR-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (13-JAN-1994) Dorokhov Y., A.N.Belozersky Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dorokhov, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tobamovirus of cruciferous plants: nucleotide sequence of genes of the transport protein, capsid protein, and 3'-terminal untranslated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dorokhov,Y.L., Ivanov,P.A., Novikov,V.K., Yefimov,V.A. Atabekov,I.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dok 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 6312)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 6312)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biol. (Mosk.)
                                                                                                                                         IKYVCKTFFASORFVYHKEFLVTRVNTWYCKFTRUDTFTLFRGYTHNIVDCEEFYKA
MDAWHYKKTLAMLINAERT IFKONAALIFWFFKVRDWYIVPLEDDS ITTGRWSRREVM
VNKDPYYTVLAHIIKTYOAKALTYN ANULSFYESIERSRVI INGVTARSKRETDKALLEPF
AMTEFLITKLGHVQDEIILKKFQKFDRTTNELIWTSLCDALMGVIPSVKETLVRGGFV
KVAEQALEIK, PELYCTFADRLVIQYKKAEEFQSCDLSKFPLESEKYYNALSELSVE
NLDSFDLEAFRTLCQOKKSVDPDMAKKVVVAINKCELTIPFKKPTEERISESLKTGGFV
RVAEQALEIK, PELYCTFADRLVIQYKKAEEFQSCDLSKFPLESEKYYNALSELKVDA
NACHTON ANULSFYESIEN
ROTENSASTION ANULSFYESIEN
SAEHKDVLSLQNDAPFCVKNLVEGSVPAYGMCFKGGFDKLDVDIADFHLKSVDAVK
RGTMASAVTTGSIEVRQMKNYJDYLSAALSATVSLLCKVLRDVHGVDPESQEKSGVMD
VRKGRWLLKFNAKSHAMGVAEDANKVILVEGSVPATGMCFKEIIEKVNFSEDLILVPGKEAS
DMGKLKTLTTCSPNGBEPPEDNAKVILVEGSVPATGMCFKEIIEKVNFSEDLILVPGKEAS
KMIIRANHAGVIRADKONVSTVDSFLMHPSRRVFKRLFIDERLMTFGCVNFLLLVEG
CONUN VVYCFGOOTBETCKNNEDVSDELKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLTYDIGGNESAHLEKGRDYVHCCMPNLDVRDIARHEGHKEAIHSYVNRLKRQQRPVP
EYQRAAFNNYAENPHEVHCDKPFQQCELTTANGTDTYAVALLSIYDIPVEEEFGSALLR
KNVKTCFAAFHFHENMLLDCDTVTLDEIGATFQRAGDNLSEFFHNESTLNYTHSFSNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAA82559.1"
/db_xref="G1:619908"
/db_xref="S9TREMEL:088604"
/db_xref="S9TREMEL:088604"
/translation="MAQFQQTIDMQTLQAAAGPNSLVNDLASRRVYDNAVEELNARSR
/translation="MAQFQQTIDMQTLQAAAGPNSLVNDLAGGFRSLELEYLMMQVPFG
RPKYHFSKAVSTEQTLIATNAXPEFEISFTHTQSAVHSLAGGFRSLELEYLMMQVPFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="genomic RNA of the cruciferous plants"
TILNEYDAVTMNLRDISLNYKDCRIDFSKSVQLPKEQPIFLKPKIRTAAEMPRTAGLL
                                                           QCDVAYVYGDTQQIPFICRVANFPYPAHFAKLVADEKEVRRVTLRCPADVTYFLNKKY
DGAVMCTSAVERSVKAEVVRGKGALNPITLPLEGKILTFTQADKFELLEKGYKDVNTV
HEVQGETYEKTAIVRLTSTPLEIISRASPHVLVALTRHTTRCKYYTVVLDPMVNVISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /transl_except=(pos:3390.
/product="178K"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polymerase'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:12242"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="ORF2; readthrough protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /function="protein containing RNA-dependant RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Tobacco mosaic virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .6312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nauk SSSR 332,
to 6312)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Moscow, Russia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               792-798 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         518-522 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .3392, aa:OTHER]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tobacco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic virus infecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of .tobacco
```

```
BASE COUNT
ORIGIN
                                                                       밁
                                á
                                                                                                                                                  Query Match
Best Local Similarity
Matches 149; Conserv
                                                                           5455
                                                                         GAAGGTTGAAGAAAAGGTGTAGTAAGTAAGTACAGACCGGAGAAGTACGCCGG 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YDKSONEFHCAVEYKIWEKLGIDEWLAEVWKOGHRKTTLKDYTAGIKTCLWYORKSGD
YDKSONEFHCAVEYKIWEKLGIDEWLAEVWKOGHRKTTLKDYDAGANLWMNFE
YTTFIGNTIIIAACLSSMIPMDKVIKKAFCGDDSLIYIPKGLDLPDIQAGANLWNFE
AKLFRKKYGYFCGRYVIHHDRGAIVYYDPLKKLISKLGCKHIRDVYHLEELRESLCDVA
SNLNNCAYFSQLDEAVAEVHKTAVGGSFAFCSIIKYLSDKRLFRDLFFV"
                                                                                                                                                                                                                                                               1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA-helicase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="magfqotiomotioaaagpusiyundlasrrvyduaveeluarsr
/translation="magfqotiomotioaaagpusiyundlaggersleeleylamqvpefgrpvungsavuslaggersleeleylamqvpefgrpvungsavuslaggersleeleylamqvpefgrpvungsavuslaggersleeleylamqvpefg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EYORAAFUNYAENPHEYHCDKDFOOCELTTANGTDTYAVALLSIYDIPYEEFGSALLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VNKDEVYTVLNHIKTYQAKALTYANVLSEVESIRSRYIINGVTARSEWDTDKAILGPL
VNKDEVYTVLNHIKTYQAKALTYANVLSEVESIRSRYIINGVTARSEWDTDKAILGPL
AMTEFLLTKLGHVQDEIILKKEQKFDRTTNELLWTSLCDALMGVIPSVKETLVRGGFV
AVAEQALEIKIPELYCTFADRLVLQYKKABEFQSCDLSKPLEESEKYYNALSELSVLE
KVAEQALEIKIPELYCTFADRLVLQYKKABEFQSCDLSKPLEESEKYYNALSELSVLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function-"protein containing methyltransferase &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLDSFDLEAFKTLCOOKSVDPDMAAKVVVAIMKCELTLPFKKRTEEEISESLKTGEGT
SAEHKDVLSLQNDAPFPCVKNLYEGSVPAYGMCPKGGGFBKLDVDIADFHLKSVDAVK
RGTMMSAVYTGSIEVROMKNYIDYLSASLSATVSNLCKVLRDVHGVDPESQEKSGVMD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KNYKTCFAAFHFHENMLLDCDTVTLDEIGATFQRAGDNLSFFFHNESTLNYTHSFSNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDDAWHYKKTLAMLNAERTIFKDNAALNEWEPKVRDMVIVPLEDASITTGRMSRREVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IKYVCKTFFPASQREVYHKBELVTRVNTWYCKFTRVDTFTLFRGVYHNNVDCEEFYKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QCDVAYVYGDTQQIPFICRVANEPYPAHFAKLVADEKEVRRVTLRCPADVTYFLNKKY
QCDVAYVYGDTQQIPFICRVANEPYPAHFAKLVADEKILTETQADKFELLEKGYKDVNTV
DGAVMCTSAVERSVKAEYVRGKGALNPITLPLEGKILTRHTTRCKYYTVVLDPMVNVISE
HEYQGETYEKTAIVRLTSTPLEIISRASPHVLVALTRHTTRCKYYTVVLDPMVNVISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DMGKLKTLTTCSPNGEPPEPNAKVILVDGVPGCGKTKEIIEKVNFSEDLILVPGKEAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VRRGRWILKPNAKSHAWGVAEDANHKLVIVLLNWDDGKPVCDETWERVAVSSDSLIYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LTYDIGGNESAHLFKGRDYVHCCMPNLDVRDIARHEGHKEAIHSYVNRLKRQQRPVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KMIIRRANHAGVIRADKONVSTVDSFLMHPSRRVFKRLFIDEGLMLHTGCVNFLLLLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEKLSNFLLDMYRVEAGIQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /function="transport protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MSIVSTEPKVSDELNLSKKEEILPKALTRLKTVSISTKDIISVK
/translation="MSIVSTEPKVSDELNLSKKEEILPKALTRLKTVSISTKDIISVKEC
ESETLCDIDLLINPLDKYRYVGILGAVFTGEWLVPDFVKGGVTISVLDKRLANSKEC
ESETLCDIDLLINPLDKYRYVGTVDAKRKPWQVHVRIQDLKIEAGWQPLALEVVS
EVITYRAAAKSKREQFKLVPNYFVSTVDAKRKPWQVHVRIQDLKIEAGWQPLALEVVS
VIGTYRAAAKSKREQFKLVPNYFVSTVDAKRKPWQVHVRIQDLKIEAGWQPLALEVVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note "ORF3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                                                                                             /db_xref="SpTREMBL:Q88606"
/db_xref="SpTREMBL:Q88606"
/tzanslation="MSYNITMPNQYOYFRANWAEPIPMLNQCISALSQSYQTQAARDT
/tzanslation="MSYNITMPNQYOYFRANWAEPIPMLNGKFDTRNRITETEESR
VRQQFSNLLSAVVAPSQREPETGSRVYVNSAVIKPLYEALMKSFDTRNRITAAAT"
PSASEVRNATQRVDDATVSIRSQIQLLLSELSSGHGYMNRAEFEALVPWTTAAAT
PSASEVRNATQRVDDATVSIRSQIQLLLSELSSGHGYMNRAEFEALVPWTTAAAT
1213 c 1590 g 1709 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein_id="CAA82560.1"
db_xref="GI:488715"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAMYTNNYVMKGLREKVVAINDPDVEGFEGVVDEFVDSVAAFKAVDNEKRRKKKVEEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VVSKYKYRPEKYAGPDSENLKEENVLOHYKPESVPVFRSGVGRAHSDA"
                                                                                                                                                                                                                                                                                                                                                                                                     product="18K"
                                                                                                                                                                                                                                                                                                                                                                                                                                            note="ORF4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            function="coat protein"
                                                                                                                                                                                            79.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domains"
                                                                                                                                                                                                Score 149; DB 14;
pred. No. 1.8e-74;
                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                       Length 6312;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                0
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
BRU03387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
```

당

147

TCCTGATTCGTTTAATTTGAAAGAAGAAA 175

밁 5575 TCCTGATTCGTTTAATTTGAAAGAAGAAA 5603

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Turnip vein-clearing virus, complete U03387 122518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Turnip vein-clearing virus.
Turnip vein-clearing virus
Turnip virus
Turn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lartey, R.T., Lane, L.C. and Melcher, U.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Electron microscopic and molecular characterization of turnip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vein-clearing virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95091521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           completion of a cDNA sequence from a tobamovirus pathogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitted (09-NOV-1993) Biochemistry & Molecular Biology, Oklahoma State University, NRC 246, Stillwater, OK 74078-0454, USA 4 (bases 1 to 6311)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                crucifers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           998835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (18 FEB-1998) Biochemistry & Molecular Biology, Oklahoma Statte University, NRC 246, Stillwater, OK 74078-0454, USA Statte University, NRC 246, Stillwater, OK 74078-0454, USA State University Oklahoma 1998 this sequence version replaced 91:619581. Sequence 1998 this sequence version replaced 91:619581. On Feb 18, 1998 this sequence version replaced 91:619581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 67; 3392 to 6311) tey, R.T., Voss, T.C. and Melcher, U.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      166, 321-322 (1995)
bases 1 to 6311)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Virol. 138 (3-4), 287-298 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Turnip vein-clearing virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /specific_host="Brassica rapa"
/db_xref="taxon:29272"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1/transl_except=(pos:3389...3391,aa:Tyr)/transl_except=(pos:3389...391,aa:Tyr)/product="RNA replicase read-through component"/product="RNA replicase read-through component"/protein_id="RAC02783.1"/protein_id="RAC02783.1"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:519645"/db_xref="GI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /lab_host="Nicotiana tabacum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="contains RNA polymerase; stop codon is suppressed under certain conditions and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note-"possibly an isolate of ribgrass mosaic virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MAGEQGTIDMQTLQAAAGRNSLVNDLASRRVYDNAVEELNARSR
/translation="MAGEQGTIDMQTLQAAAGRNSLVSLAGGLRSLELEYLMMQVPFG
RPKVHFSKAVSTEQTLIATNAXPEFEISFTHTQSAVHSLAGGLRSLELEYLMMQVPFVP
RPKVHFSKAVSTEQTLIATNAXPEFEISFTHTQSAVHSLAGGLRSLELEYLMMQVPFVP
RPKVHFSKAVSTEQTLIATNAXPEFEISFTHTQSAVHSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLRSLAGGLR
                                                                                                                                                                                                                                                                                          EYORAAFUNYAENPHEYHCDKDFQQCELTTAYGTDTYAVALHSIYDIPVEEFGSALLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNVKTCFAAFHFHENLLDCDTVTLDETGATFQKSGDNLSFFFHNESTLNYTHSFSNI
KNVKTCFAAFHFHENLLDCDTVTLDETGATFQKSGDNLSFFFHNESTLNYDCEEFYKA
IKYVCKTFFPASQRFVYHKEFLVTRVNTWYCKFTRVDTFTLFRQVYHNUVDCEEFYKA
QCDVAYVYGDTKQIPEICRVANEPYPAHEAKLVADEKEVRRVTLRCPADVTYELNK
DGAVMCTSAVERSVKAEVVRGKGALNPITLPLEGKILTETQADKEELLEKGYKDVI
                                                                                                                                                     DMGKLKTLTSCSPNGEPPEPNAKVILVDGVPGCGKTKEIIEKVNFSEDLILVPGKEAS
                                                                                                                                                                                                    VRRGRWLLKPNAKSHANGVAEDANHKLVIVLLNWDDGKPVCDETWERVAVSSDSLIYS
                                                                                                                                                                                                                                                    KGTMMSAVYTGSIKVQQMKNYIDYLSASLAATVSNLCKVLRDVHGVDPESQEKSGVWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6311 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VRL 18-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and expressed as
```

```
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                  CGAATTCGTCGATTCGGTTGCAGCATTTAAAGCGGTTGACAA 68
                                                                                                                                                                                                         CGAATTCGTCGATTCGGTTGCAGCATTTAAAGCGGTTGACAA 5495
MDVFRA
Gallid
L41561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1810
                                                                                                                                                                                                                                                                                                                            22.3%;
ilarity 100.0%;
Conservative (
                               herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - Kranslation-"MSYNITNENOYOYFAAVWAEPIPMLNOCMSALSQSYQTQAARDT
VRQQFSNLLSAVVTPSQRFPDFGSRVYVNSAVIKPLYEALMKSFDTRNRIIETEEESR
PSASEVANATQRVDDATVAIRSQIQLLLSELSNGHGYMNRAEFEALLPWTTAPAT"
1195 c 1586 g 1720 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KVAEQALEIKVPELYCTFADRLÜLQYKKAEEFOSCDLSKPLEESEKYYNALSELSVLE
NLDSEDLEAFKTLCQOKNVDPDMAAKVVVAIMKSELTLPFKKPTEEEISESLKPGEGS
CAEHKEVLSLQONDAPPPCVKNLVEGSVPAYGMCPKGGFDKLIVDJIADFHLKSVDAVK
KGTMMSAVYTGSIKVQOMKNYIDYLSASLAATVSNLCKVLRDVHGVDPESQEKGGVWD
VRRGRWLLKPNAKSHAWGVAEDANHKLVIVLLNWDDGKPVCDETWFRVAVSSOSLIYS
DMGKLKTLTSCSPNGEPPEPNAKVILVDGVPGCGKTKEIIEKVNFSEDLILIVPGKEAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product="coat protein"
/protein_id="aac02785.1"
/db_xref="GI:514839"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="msivsyepkysdflnlskkeeilpkaltrlktysistkdiisyk
ESETLCDIDLLINVPLDKYRYVGILGAVFTGEWLVPDFVKGGVTISVIDKRLVNSKEC
VIGTYRAAAKSKRFQFKLVPNYFVSTVDAKRKPWQVHVRIQDLKIEAGWQPLALEVVS
VAMVTNNVVMKGLREKVVAINDPDVEGFEGVVDEFVDSVAAFKAVDNFRKKKKVEER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DVVSKYKYRPEKYAGPDSFNLKEENVLQHYKPESVPVLRSGVGRAHTNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="movement protein"
/protein_id="AAC02784.1"
/db_xref="GI:514838"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEVQGETYEKTAIVRLTSTPLEIISSASPHVLVALTRHTTCCKYYTVVLDPMVNVISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QCDVAYVYGDTKQIPFICRVANFPYPAHFAKLVADEKEVRRVTLRCPADVTYFLNKKY
DGAVMCTSAVERSVKAEVVRGKGALNPITLPLEGKILTFTQADKFELLEKGYKDVNTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KMTIRRANQAGVIRADKDNVRTVDSFLMHPSRRVFKRLFIDEGLMLHTGCVNFLLLLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IKYYCKTEFPASQRTYYKKEELVTRYNTWYCKETRYDTFTLFRGYYHNNYDCEEFYKA
MDDAMIYKKTLAMLNAERTIEKDNAALNEWFPKYRDMYIVPLDASITTGRNSRREH
VNKOFYYTVLNHIKTYQAKALTYANYLSFYESIRSRYIINGYPARSEMPJDKAILGPL
MYTFFLTKLGHYODEIILKKFOKFDRTTNELIWTSLCDALMGVIPSVKETLYRGGFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EYQRAAFNNYAENPHFVHCDKPFQQCELTTAYGTDTYAVALHSIYDIPVEEFĞSALLR
KNVKTCFAAFHFHENMLLDCDTVTLDEIGATFQKSGDNLSFFFHNESTLNYTHSFSNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MAQFQQTIDMQTLQAAAGRNSLVNDLASRRVYDNAVEELNARSR
RPKYHESKAVSTEQTLIATNAVPEFEISFTHTQSAVHSLAGGLRSLELEYLMMQVPFG
SLTYDIGGNFSAHLFKGRDYVHCCMPNLDVRDIARHECHKEAIYSYVNLLKRQORPVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VTTFIGNTIIIAACLSSMIPMDKVIKAAFCGDDSLIYIPKGLDLPDIQAGANLMMNFE
AKLFRKKYGYFCGRYVIHHDRGAIVYYDPLKLISKLGCKHIRDVVHLEELRESLCDVA
SNLNNCAYFSQLDEAVAEVHKTAVGGSFAFCSIIKYLSDKRLFRDLFFV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEVOGETYEKTAIVALTSTPLEIISSASPHYLIVALTRHTTCCKYYTVVLDPMYNVISE
MEKLSNFLLDMYRVEAGVQYQLQIDAVFROSNLFVQTFRSGDMEDMQFYYDALLDGNS
TILMEEDAVTMULRDISLNVKDCRLDESKSYQLEKEODFFLKBKIRTAAEMPRYAGLL
ENLVAMIKRNMNAPDLTGTIDIEDTASLVVEKFWDSYYDKEFSGTNEMTMTRESFSRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="RNA replicase component"
/protein_id="AAC02782.1"
/db_xref="GI:514836"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      codon_start-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INAIFGPMFSELTRMLLERIDSSKFLFYTRKTPAQIEDFFSDLDSTQAMBILELDISK
YDKSQNEFHCAVEYKIWEKLGIDEWLAEVWKQGHRKTTLKDYTAGVKTCLMYQRKSGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSKQESSTVGQLADFNFVDLPAVDEYKHMIKSQPKQKLDLSIQDEYPALQTIVYHSKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               function="intercellular transport of infection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contains capping methyltransferase and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LIDMY RVEAGVQ
                               mRNA
                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                     Score 42;
Pred. No.
                           1568 bp
\ fragment.
                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                  DB 14; 1
8.8e-13;
                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                 Length 6311;
                                                                                                                                                                                                                                                                                                                      Indels
                                                       linear
                                                    VRL 13-APR-1995
                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA helicase
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                     TITLE
```

SdC

BASE CONTIGIN

COUNT

Sgo

RESULT MDVFRA

JOURNAL

₽ Ş

5454

27

Matches

```
SOURCE
ORGANISM
                                                                                                                                      RESULT 6
AR096004
LOCUS
                                                                                                              ACCESSION
                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
AR067739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                      KEYWORDS
                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Snoor
                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                Query Match
Best Local
                            AUTHORS
                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                    30
                                                                                                                                                                                               1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGA 41
l (bases 1 to 2126)
Shabon,U. and Bergsma,D.
Cloning of human GPR14 receptor
Patent: US 6005074-A 1 21-DEC-1999;
                                                                 Unknown
                                                                           Unknown.
                                                                                                              Sequence 1
AR096004
                                                  Unclassified.
                                                                                                   AR096004.1
                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 2126)
Shabon,U. and Bergsma,D.
Nucleic acid encoding human GPR14 receptor
Patent: US 5851798 A 1 22-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1
AR067739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li,D., Greenall,L., Smith,G.D., O'Sullivan,G. and Ross,N. Marek's disease virus irs-specific cDNA clones are derive single transcription unit complementary to the icp4 gene Unpublished (1995)
                                                                                                                                       AR096004
                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR067739.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR067739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallid herpesvirus (strain RPL-1) cDNA to mRNA Gallid herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassified.
                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Viruses; dsDNA viruses, no RNA stage; Herpesviridae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L41561.1 GI:767682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 1568)
                                                                                                                                                                                                                                                                                                                  317
                                                                                                                                                                                                                                                  18.6%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                              /organism≖"unknown"
763 c 669 g
                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1. .2126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cell_type="lymphoblast"
371 c 474 g 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:39566"
/haplotype="US"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Gallid herpesvirus"
/strain="RPL-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cell_line="RPL-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                      2126 bp
from patent US 6005074.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from patent
                                                                                                 GI:10024409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 1568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20.2%;
                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                               Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2126 bp
t US 5851798.
                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                               377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  334 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 14;
. 1.6e-10
                                                                                                                                                                                                                                                                          DB 6;
                                                                                                                                      DNA
                                                                                                                                                                                                                                                              .6e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .6e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                           Length 2126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clones are derived from a to the icp4 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1568
                                                                                                                                                                                                                                                  Indels
                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                     PAT 08-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

밁

30

GTCGACGGTATCGATAAGCTTGATATCGAATTCGT

```
TITLE
JOURNAL
FEATURES
           Ş
                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                       RESULT 8
AR121154
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                   á
                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
AR116595
                                                                                  BASE COUNT
                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                         Query Match
Best Local
                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                             30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                       Sequence 1 from patent US 6159700
AR121154
                                                                                                            1 (bases 1 to 2126)
Aiyar, N.V., Ames, R.S., Arnold, A.Romanic., Al-Barazanji, K., Biyar, N.V., Ames, R.S., Arnold, A.Romanic., Al-Barazanji, K., Bergsma, D.J., Chambers, J., Douglas, S.A., Foley, J.J., Gout, Rhandoudi, N., Sarau, H.M., Shabon, U. and Willette, R.N. Wethod of finding agonist and antagonist to human and rate Patent: US 6159700-A 1 12-DEC-2000;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1 from patent US 6133420
AR116595
                                                                                                                                                                                                                               AR121154.1
                                                                                                                                                                                       Unclassified
                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chambers, J.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to Ames, R.S. Jr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR116595.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 Similarity
35; Conserv
                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.
                                                                                  317
                                                                                                                                                                                                                                                                                                                                                                                                            317
                              18.6%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              317
                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptides
t: US 6133420-A 1 17-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.6%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            ςυ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç)
                                                                              /organism-"unknown"
763 c 669 g
                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
763 c 669 g
                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .2126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .2126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="unknown"
763 c 669 g
                                                                                                    .2126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:14096917
                                                                                                                                                                                                                                                                                                                                                                18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sarau, H.M., Foley, J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2126)
                              Score 35; DB
Pred. No. 8.6
0; Mismatches
                               0
                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                 Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                 377
                                                                                                                                                                                                                                                                                                                                                                                                           377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             377
                                        DB 6; L
                                                                                                                                                                                                                                                                                                                                                                DB 6; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6; Lo
                                                                                rt
                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shabon, U.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                Length 2126;
                                                                                                                                                                                                                                                                                                                                                                          Length 2126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2126;
                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                 and rat GPR14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bergsma, D.
                                                                                                                                                                                                                                                           PAT
                                                                                                                                                     Gout, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 16-MAY-2001
                              0,
                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                           16-MAY-2001
                             Gaps
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                             0;
                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
AR153837
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
AB027145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                        gene
               CDS
                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Toda, S., Kajii, Y. and Nishikawa, T. Direct Submission Submitted (11-MAY-1999) Shigenobu Toda, National Instineuroscience, NCNP, Department of Mental Disorder Resea Ogawahigashi, Kodaira, Tokyo 187-8502, Japan (E-mail:toda@psy.med.tohoku.ac.jp, Tel:81-423-46-1714, Fax:81-423-46-1744)
                                                                                                                                                                                                                                                                                     Toda, S., Kajii, Y., Sato, M. and Nishikawa, T.
Reciprocal expression of infant- and adult-preferring transcripts of CDCrel-1 septin gene in the rat neocortex
Biochem. Biophys. Res. Commun. 273 (2), 723-728 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Harada,J.J., Lotan,T., Ohto,M.-a.,
Leafy cotyledon1 genes and methods
in transgenic plants
Patent: US 6235975-A 4 22-MAY-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                              CDCrel-1/PNUTL1 fetus form
                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (strain:wistar) neonatal male neocortex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AB027145.1 GI:8953678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AB027145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR153837.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4 from AR153837
                                                                                                                                                                                                                                                                               20334336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR153837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                               (bases 1 to 110)
                                                                                                                                                                                                                                                                                                                                                (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 7560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
              /gene="CDCrel-1/PNUTL1f"
57. .>110
                                                  /tlssue_type="neocortex"
/dev_stage="neonatal"
                                                                               /sex="male"
                                                                                            /db_xref-"taxon:10116"
                                                                                                           /organism="Rattus norvegicus"
/strain="Wistar"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="unknown"
1326 c 1264 g
                                                                                                                                                  ocation/Qualifiers
'gene="CDCrel-1/PNUTL1f"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:15121369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1264 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110 bp mRNA
for CDCrel-1F, pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7560 bp
US 6235975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.8e-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goldberg, R.B. of modulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NA linear
partial cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 7560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     others
                                                                                                                                                                                                        Institute
Research;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Fischer, R.L. embryo developme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                         of
4-1-1
                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 12
G16087/c
    Locus
                                                                      밁
                                                                                           Ş
                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
CSPAG5R/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                      138
                                                                                                                                    Local
                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCGACGGTATCGATAAGCTTGATATCGAATTCG
     G16087
                                                                                                                                                                                                                                                                                                                                                                     Submitted (16-DEC-1994) Nigel J. Robinson, Biochemistz Genetics, The Medical School, University of Newcastle, Place, Newcastle upon Tyne, NE2 4HH, UK (bases 1 to 338) Robinson, N.J., Robinson, P.J., Gupta, A., Bleasby, A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 338)

Robinson,N.J., Robinson,P.J. and Gupta,A.

Genomic DNA sequence obtained in the process of generating a random sequence database greater than 10 kb from single sequence runs from random clones of a Calothrix D253 library
                                                                                                                                                                                                                                                                                                                    Singular over-representation of an octame DNA from many cyanobacteria Nucleic Acids Res. 23 (5), 729-735 (1995)
                                                                                                                                                                                                                                                                                                                                                                 and Morby, A.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Robinson, N.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Singular over-representation of HIP1 in DNA from many cyanobacteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robinson, N.J., Robinson, P.J., and Morby, A.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Calothrix sp.
Bacteria; Cyanobacteria; Nostocales; Rivulariaceae; Calothrix.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CSPAG5R 338 bp DNA Calothrix D253 genomic DNA (clone AG5R).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Calothrix sp
                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 100, 34; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 338)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 338)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                     /clone_lib="LZAPCalothrix-LIB"
87 c 77 g 91 t
                                                                                                                                                                                                                                          /organism="Calothrix
/strain="D253"
                                                                                                                                                                                                              /db_xref="taxon:1187"
/clone="AG5R"
                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="BAA98052.1"
/db_xref="GI:8953679"
/translation="MSTGLRYKSKLATPEDKQ"
31 c 31 g 18 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product-"CDCrel-1F"
                                                                                                                                   18.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.1%;
                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 34; DB; Pred. No. 2.4; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                   Score 34;
Pred. No.
                                                                                                                     Mismatches
  369
 đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gupta, A.,
                                                                                                                                DB 1; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10; 1
. 2.4e-08;
ches 0;
                                                                  105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53
 DNA
                                                                                                                                                                                                                                                                                                                                                octameric
                                                                                                                                             Length 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bleasby, A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                n, Biochemistry of Newcastle, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 110;
                                                                                                                     Indels
 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                               palindrome, HIP1,
STS 13-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BCT
                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                        Whitton, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Whitton, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                             / and
Framlington
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                      밁
                                                                                                                                                                                            Ş
```

```
primer_bind
primer_bind
BASE COUNT
ORIGIN
                                                                                                              RESULT 13
G01691/c
LOCUS
                                 SOURCE
ORGANISM
                                                                       ACCESSION
VERSION
                                                         KEYWORDS
                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                               323
                                                                                                                                                                                                   1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                            GTCGACGGTATCGATAAGCTTGATATCGAATTCG
G01691
G1:595215
STS sequence; sequence tagged site.
G1:595215
STS: STS sequence; primer; sequence tagged site.
G1:103 gallus vector-pBluescript II KS+ host-E. coll.
Gallus gallus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Primer A:
Primer B:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gallus gallus vector-pBluescript II KS+ host-E. Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Buffer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protocol:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STS size: 114
                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCR Profile:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: hcheng@pilot.msu.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3606 E. Mount Hope Rd, Tel: 5173376758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Hans H. Cheng
Avian Disease and Oncology Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Archosauria; Aves; Neognathae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chicken STS ADL320, sequence tagged site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ax: 5173376776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 369)
                                                                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                                                                                                                                                                                          Triton X-100:
                                                                                                                                                                                                                                                                                                                                                                                                                                                MgCl2:
KCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Taq polymerase:
Total Vol:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Tris-HCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dNTPs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Thermal Cycler:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polymerization:
PCR Cycles:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Denaturation:
Annealing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     remplate:
                                                                                                                                                                                                                                                                                              complement(129. .148)
54 c 112 g
                                                                                                                                                                                                                                                                                                                                                 /organism="Gallus gallus"
/db_xref="taxon:9031"
                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGGGTTATTGCTGCTCTGC
GTCCTCAGTGTGCCAAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:1184628
                                                                                                                                                                                                                           18.1%; 5C
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                       10 mM
9.0
0.1 %.
                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                           Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
51
72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MJ Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    East Lansing, MI 48823, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      degrees C
degrees C
degrees C
                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               로론
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.4 units/ul
25 ul
                                                                                                                                                                                                                                                                                                 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E M
                                                                                                                                                                                                                             DB 11;
. 2.7e-08;
ches 0;
                                                                                                                                                                            290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for 1 minute
for 1 minute
for 1 minute
                                                                                                                                                                                                                                                     Length 369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coli.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                             0
                                                                                                          07-DEC-1994
```

```
JOURNAL
REFERENCE
AUTHORS
                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                             RESULT 14
CSPAG13R/c
LOCUS
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                      BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                         SOURCE
                                                                                                                                   KEYWORDS
                                                                                                                                                                 DEFINITION
                                                                                                                                              ERSION
                                                                                                                                                        CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                                                               STS
primer_bind
primer_bind
c COUNT
                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                  257
                                                                                                                                                                                                                                           1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                               GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                          CSPAG13R
Calothrix D253 genomic
Z47173
Z47173.1 GI:619086
                                                                            Calothrix sp.
Bacteria; Cyanobacteria; Nostocales; Rivulariaceae; Calothrix.
1 (bases 1 to 397)
                                        Robinson, N.J., Robinson, P.J. and Gupta, A. Genomic DNA sequence obtained in the process of generating a random sequence database greater than 10 kb from single sequence runs from random clones of a Calothrix D253 library
  Robinson, N.J., Robinson, P.J., and Morby, A.P.
                                Unpublished
                                                                                                                       Calothrix sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Buffer:
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primer A: TCATCAGAAGCCCAAGCACA
Primer B: ATGAATGAAACCCATCTAAC
STS size: 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protocol:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Hans H. Cheng
Avian Disease and Oncology Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: hcheng@pilot.msu.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: 5173376776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synonyms: B367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phasianinae;
                       (bases 1 to 397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Profile:
                                                                                                                                                                                                                                                                         18.1%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                    MgCl2:
KCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Taq polymerase:
Total Vol:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E. Mount Hope Rd, East Lansing, MI 5173376758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polymerization:
                                                                                                                                                                                                                                                                                                                                                                                                                    Triton X-100:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Tris-HCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dNTPs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thermal Cycler:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Annealing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Denaturation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cemplate:
                                                                                                                                                                                                                                                                                                                              complement(119. .138)
81 c 81 g
                                                                                                                                                                                                                                                                                                                                                                       /organism="Gallus gallus"
/db_xref="taxon:9031"
                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ae; Gallus.
1 to 373)
                                                                                                                                                                                                                                                                                                                                                                                                                 1.5 mM
50 mM
10 mM
9.0
0.1 %.
                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                   Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ξ
                                                                                                                                                              397 bp DNA
DNA (clone AG13R).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
48
72
30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 degrees C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Research
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.4 units/ul
25 ul
           Gupta, A.,
                                                                                                                                                                                                                                                                                                                               113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M m n
                                                                                                                                                                                                                                224
                                                                                                                                                                                                                                                                                   DB 11; ; 2.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r 1 minute
r 1 minute
r 1 minute
                                                                                                                                                                                                                                                                          0;
          Bleasby, A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48823, USA
                                                                                                                                                                                                                                                                                             Length 373;
                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                          BCT
                                                                                                                                                                                                                                                                         0
            Whitton, B.A.
                                                                                                                                                                          04-JAN-1995
                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
BASE COUNT
                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
HRSTCRAG
                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                 JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                   CDS
```

```
Query Match
Best Local Similarity
                                        J_segment
                                                                             V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90 GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Equus caballus (clone: T131) DNA. Equus caballus (clone: T81) DNA. Equus caballus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalla; Eutheria; Perissodactyla; Equidae; Equus. 1 (bases 1 to 487)
Schrenzel, M.D., Watson, J.L. and Ferrick, D.A. Characterization of horse (Equus caballus) T-cell recharacterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L27850.1 GI:790760
T-cell receptor; V-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Equus caballus (clone T131) T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                94299284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chain genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Singular over-representation of an octameric palindrome, DNA from many cyanobacteria
Nucleic Acids Res. 23 (5), 729-735 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
Submitted (16-DEC-1994) Nigel J. Robinson, B
Genetics, The Medical School, University of
Place, Newcastle upon Tyne, NE2 4HH, UK
4 (bases 1 to 397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Robinson, N.J., Robinson, P.J., Gupta, A., Bleasby, A.J., and Morby, A.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunogenetics 40 (2), 135-144 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 (bases 1 to 397)
Robinson, N.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Singular over-representation of HIP1 in DNA from many cyanobacteria Unpublished
  114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Calothrix sp."
/strain="D253"
/db_xref="taxon:1187"
/clone="AG13R"
/clone_1ib="LZAPCalothrix-LIB"
a 91 c 88 g 113 t
            /product-"T
431..481
/note-"DJ"
                                                                                              /translation-"SRSTVSISLISNSARGHISLERGVLYSKPLKMLMFLLLLGPTGS
GLGVLVSQHPSRAICKNGSSVEMECRTVDLQAQTVCWYQQWANQGITPVATSNQGLSS
TYEQGFPKVKFPISHPNLTFSTLTILCAHPANSGLYFSCAR"
                                                                                                                                                                                                                      translation of the corresponding V_region. Presently translation qualifiers on V_region features are illegal.
                                                                                                                                                                                                                                                                                                        /organism="Equus caballus"
/db_xref="taxon:9796"
/clone="T131"
                                                                                                                                                            /protein_id="AAA65661.1"
/db_xref="GI:790761"
                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                       codon_start=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                               note="This CDS feature is included to show the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18.1%; Score 34; DB
100.0%; Pred. No. 2.1
cive 0; Mismatches
o
                                                         cell receptor"
123
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.8e-08;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochemistry and
f Newcastle, Framlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             V-region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostom1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAM 01-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Whitton, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

Search completed: February 19, 2003, 07:57:01 Job time : 2608 secs	Qy 1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34	ORIGIN Ouery Match 18.1%; Score 34; DB 4; Length 487; Best Local Similarity 100.0%; Pred. No. 2.8e-08; Matches 34; Conservative 0; Mismatches 0; Indels
---	--	---

```
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 19, 2003, 06:07:16; Search time 229 Seconds (without alignments) 1848.802 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 gtcgacggtatcgataagct.....gaagaaagagctcaccatgg 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-758-962-1
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N_Geneseq_101002:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1996.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2001.BAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2001.BAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2001.BAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2001.BAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2001.BAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.3 Coppright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                   /gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4370478
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

c 9	0	. 7	0	· O	4	ο . ω			Result
35	35	ω 5	43	44	149	149	181	188	Score
18:6	18.6	18.6	22.9	23.4	79.3	79.3	96.3	100.0	Query Match
		122							% Query Match Length DB
23	23	24	24	24	24	24	24	24	D _B
ABV45268	ABV36222	ABQ76061	ABQ76064	ABQ76063	ABQ76059	ABQ76060	ABQ76062	ABQ76058	ID
Human prostate exp		Clone TXS.GFP-IRES		Clone SC196 contai	Clone TXS.GFP-HIRE	Clone TXS.GFP-SERI	Clone TXS.GFP-IRES	Clone TXS.GFP-IRES	Description

P P X

New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in

	a	O	ი	a			O		O			O					O		O	O		C	O	ი	ი										ი	
45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	
34	34	34	34	34	34	34	34	34	34	34	34	34	34	3 4	34	34	34	34	34	34	3 4	34	34	34	34	ω 4	35	<u>3</u> 5	35	35	ယ ၄ ၊	3 5	35	35	35	
18.1	•	•	•	•	•	18.1	•	•	18.1	•	18.1	•	18.1	18.1	18.1	•	18.1	•	٠	18.1	٠	•	•	•	18.1	•		•	•	٠			•	18.6		
741	740	723	712	655	642	626	616	610	607	602	591	587	585	528	523	508	502	501	491	470	421	420	362	361	353	99	7560	7560	7560	3905	3236	2126	2126	1353	514	
.22	22	22	22	22	22	22	20	22	22	22	24	20	22	22	22	22	21	22	22	20	22	20	21	21	22	23	22	21	19	24	24	20	19	24	23	
AAH55734	AAF45087	ABA14285	AAD05161	ABA14170	ABA13400	AAS41400	AAX22262	ABA13372	ABA14282	ABA13360	ABN90021	AAX37393	ABA13335	ABA14286	ABA13305	ABA13368	AAC59628	ABA14279	ABA13327	AAX37520	3	AAX37517	646	AAC59649	197	ABL53457	AAD16916	AAZ45840	AAV61024	ABN83030	AAK99298	7		ABK52453	ABV49873	
	secreted	nervous	secreted	nervous		encoding r	secreted	nervous	nervous		Mouse clone IMX3_6		nervous	nervous	nervous	nervous s	secrete	nervous	nervous	secrete	nervous s	secreted	prostate	secrete	EVOUS	d NBE-T	y cotyled	EcpR	ggo	춫	of the	GPR14	GPR14	sory facto	. Human prostate	
tumou	oro	8yst	oro	syst	syst	nove	pro	syst	syst	syst	9	oro	syst	syst	syst	syst	pro	gyst	syst	oro	syst	pro	can	pro'	syst	fraq	 (fraqm	ťγ.	rep	ď,	ing	~	 	ехр	

ALIGNMENTS

PR 09-JAN-2001; 2001US-0758962. XX PA (BIOS-) BIOSOURCE GENETICS CORP.	OS Synthetic. XX PN W0200255719-A2. XX PD 18-JUL-2002. XX	KW IRES; internal ribosome entry site; viral protein; bicistronic; KW virus infection; coat protein; protein replacement therapy; crop; KW nutritional value; seed oil content; ds. XX	AA DT 30-SEP-2002 (first entry) XX XX Clone TXS.GFP-IRES8-CP containing IRES DNA sequence. XX	RESULT 1 ABQ76058 ID ABQ76058 standard; DNA; 188 BP. XX AC ABQ76058;
		ite; viral protein; k protein replacement t tent; ds.	ng IRES DNA sequence.	
		bicistronic; therapy; crop;	•	

Carr

Ŧ

```
RESULT 2
ABO7602
ID ABQ7
XX ABQ7
AC ABQ7
XX 30-S
XX IRES
XX IRES
KW Virt
KW INUL
XX VIRT
KW NUL
XX VIRT
XX OS
DB 18-:
PD 18-:
YX OS-:

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site upstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The polynucleotide and vectors of the invention are useful for directing rapid and high-level expression of foreign genes in mature, differentiated, plant tissue. These are particularly useful in protein replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the clone TXS.GFP.IRESS-CP containing an IRES region described in the method of the invention.
                                                     09-JAN-2001; 2001US-0758962
                                                                                                      09-JAN-2002; 2002WO-US01123
  (BIOS-) BIOSOURCE GENETICS CORP
                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                            18-JUL-2002
                                                                                                                                                                                                               WO200255719-A2
                                                                                                                                                                                                                                                                                                                nutritional value;
                                                                                                                                                                                                                                                                                                                                IRES; internal ribosome entry site; viral protein; bicistronic; virus infection; coat protein; protein replacement therapy; cro
                                                                                                                                                                                                                                                                                                                                                                                                              Clone TXS.GFP-IRESs-CP containing IREScp DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABQ76062 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           internal ribosome entry site (IRES) nucleotide sequence, an open reading frame (ORF1) encoding a peptide and an ORF2 encoding a viral protein, where the IRES is located between ORF1 and ORF2. The novel polynucleotides of the invention are used in the construction of a recombinant potato virus X-based viral vector containing a nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes a novel isolated polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 4; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a metabolic pathway to improve the nutritional value of a crop or alter the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGGTTGCAGCATTTAAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCATGG 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGGTTGCAGCATTTAAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTACAGACCGGAGAAGTACGCCGGTCCTGATTCGTTTAATTTGAAAGAAGAAGAAGACGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188 BP; 66 A; 26 C; 51 G; 45 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188
                                                                                                                                                                                                                                                                                                                seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                content;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 188; DB 24;
Pred. No. 1.3e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                дs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 comprising an an open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
ABQ76060/c
ID ABQ760
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This invention describes a novel isolated polynucleotide comprising an CC internal ribosome entry site (IRRS) nucleotide sequence, an open reading Crame (ORF1) encoding a peptide and an ORF2 encoding a viral protein, where the IRRS is located between ORF1 and ORF2. The novel polynucleotides of the invention are used in the construction of a recombinant potato virus x-based viral vector containing a nucleic acid construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site upstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The collision of the viral vector on a host in the presence of that IRES. The presence of the IRES of the rate of the viral vector on a host in the presence of the rate of inferential for directing the vector of the very of the rate of the very of the seed. This sequence represents a fragment of the clone TXS.GFP.IRES.-CP containing an IRES. The containing an IRES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 181
                        WO200255719-A2
                                                                     Synthetic
                                                                                                                                                                                                                    Clone TXS.GFP-SERI-CP containing IRES DNA sequence
                                                                                                                 IRES; internal ribosome entry site; viral protein; bicistronic; virus infection; coat protein; protein replacement therapy; crop; nutritional value; seed oil content; ds.
                                                                                                                                                                                                                                                                               30-SEP-2002
                                                                                                                                                                                                                                                                                                                                  ABQ76060;
                                                                                                                                                                                                                                                                                                                                                                                   ABQ76060 standard; DNA; 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 181 BP; 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Fig 4; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-557829/59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Santa-Cruz S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 C 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGGTTGCAGCATTTAAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGGTTGCAGCATTTAAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTACAGACCGGAGAAGTACGCCGGTCCTGATTCGTTTAATTTGAAAGAAGAAGAAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGTACAGACCGGAGAAGTACGCCGGTCCTGATTCGTTTAATTTGAAAGAAGAAGAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96.3%; 5-
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; 24 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ှ
ရှာ
(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Toth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             b; Score 181; DB
b; Pred. No. 3.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                   ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chapman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.2e-78;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
```

Length 181; Indels

0

Gaps

0

120

120 60 60

```
Ş
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                     RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cc internal ribosome entry site (IRES) nucleotide sequence, an open reading conforme (ORF1) encoding a peptide and an ORF2 encoding a viral protein, cc where the IRES is located between ORF1 and ORF2. The movel construction of a cc recombinant potatio virus x-based viral vector containing a nucleic acid cc construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the constructs are used in a method for regulating the rate of placing the constructs are used in a most regulation is achieved by placing the construct comprising an internal ribosomes entry site cupstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The cc infection of the viral vector on a host in the presence of that IRES. The cc infection and high-level expression of foreign genes, in mature, considered and high-level expression of foreign genes, in mature, cc replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the clone TXS.GFP.SERI-CP containing an IRES region described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                              IRES; internal ribosome entry site; viral protein; bicistronic; virus infection; coat protein; protein replacement therapy; cronutritional value; seed oil content; ds.
Synthetic
                                                                                                 Clone TXS.GFP-HIRES-CP containing IRES DNA sequence
                                                                                                                                            30-SEP-2002
                                                                                                                                                                                                              ABQ76059 standard; DNA; 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 187 BP; 45 A; 47 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 4; Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Santa-Cruz S,
                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BIOS-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-JAN-2001; 2001US-0758962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-JAN-2002; 2002WO-US01123
                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                            149
                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29
                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGATTCGTTTAATTTGAAAGAAGAAAGA 177
                                                                                                                                                                                                                                                                                                        CTGATTCGTTTAATTTGAAAGAAGAAGA 32
                                                                                                                                                                                                                                                                                                                                                                          AGGTTGAAGAAAGGGTGTAGTAAGTAAGTATAAGTACAGACCGGAGAAGTACGCCGGTC 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-557829/59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOSOURCE GENETICS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79.3%; Sillarity 100.0%; I conservative 0;
                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            describes a novel isolated polynucleotide comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pogue GP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ); Score 149; DB 24; I
)%; Pred. No. 1.1e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Toth RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 G; 68 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chapman S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                crop;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
RESULT 5
ABQ76063
ID ABQ7
       S
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
IRES; internal ribosome entry site; viral protein; bicistronic;
virus infection; coat protein; protein replacement therapy; crop;
                                                        Clone
                                                                                           30-SEP-2002
                                                                                                                                                               ABQ76063 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  upstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The polynucleotide and vectors of the invention are useful for directing rapid and high-level expression of foreign genes in mature, differentiated, plant tissue. These are particularly useful in protein replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the clone TXS.GFP.HIRES-CP containing an IRES region described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    internal ribosome entry site (IRES) nucleotide sequence, an open reading frame (ORF1) encoding a peptide and an ORF2 encoding a viral protein, where the IRES is located between ORF1 and ORF2. The novel polynucleotides of the invention are used in the construction of a recombinant potato virus X-based viral vector containing a nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 251 BP; 72 A; 51 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention describes a novel isolated polynucleotide comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-557829/59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-JAN-2001; 2001US-0758962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JAN-2002; 2002WO-US01123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200255719-A2.
                                                                                                                                                                                                                                                       217
                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Santa-Cruz S, Pogue GP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BIOS-) BIOSOURCE GENETICS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JUL-2002.
                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                               97
                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGATTCGTTTAATTTGAAAGAAGAAA 175
                                                                                                                                                                                                                                                                                                                                                          GAAGGTTGAAGAAAAGGGTGTAGTAAGTAAGTATAAGTACAGACCGGAGAAGTACGCCGG
                                                                                                                                                                                                                                                                                                                                                                                           CGAATTCGTCGATTCGGTTGCAGCATTTAAAAGCGGTTGACAACTTTAAAAGAAGGAAAAA
                                                                                                                                                                                                                                                                                                                         GAAGGTTGAAGAAAAGGGTGTAGTAAGTATAAGTACAGACCGGAGAAGTACGCCGG
                                                   SC196 containing IREScp DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                         (first entry)
                                                                                                                                                                 DNA; 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Toth RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 149; DB 24;
Pred. No. 1e-62;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76 G; 52 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chapman S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                        146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reading
                                                                                                                                                                                                                                                                                                                                                                                           156
                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                       216
```

```
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                   IRES; internal ribosome entry site; viral protein; bicistronic; virus infection; coat protein; protein replacement therapy; crop; nutritional value; seed oil content; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site upstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The polynucleotide and vectors of the invention are useful for directing rapid and high-level expression of foreign genes in mature, differentiated, plant tissue. These are particularly useful in protein replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the clone SC196 containing an IRESC region described in the method of the invention.
                                                         Synthetic
                                                                                                                                                                                                                            Clone SC197 containing IREScp DNA sequence
                                                                                                                                                                                                                                                                                                   30-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                   ABQ76064;
                                                                                                                                                                                                                                                                                                                                                                                                                            ABQ76064 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  frame (ORF1) encoding a peptide and an ORF2 encoding a viral where the IRES is located between ORF1 and ORF2 The The Annal of the IRES is located between ORF1 and ORF2 The Annal oRF2 The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polynucleotides of the invention are used in the construction of a recombinant potato virus X-based viral vector containing a nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes a novel isolated polynucleotide comprising an internal ribosome entry site (IRES) nucleotide sequence, an open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Fig 4; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-JAN-2001; 2001US-0758962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-JAN-2002; 2002WO-US01123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 GGTTGAAGAAAAGGGTGTAGTAAGTAAGTATAAGTACAGACCGG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nutritional value; seed oil content; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIOSOURCE GENETICS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23.4%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                         DNA; 181 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; 31 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Toth RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chapman S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 24; 1
9.3e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and ORF2. The novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carr F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

WO200255719-A2

09-JAN-2002; 2002WO-US01123

WO200255719-A2

```
RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
                                                                                                                                                    IRES; internal ribosome entry site; viral protein; bicistronic; virus infection; coat protein; protein replacement therapy; crop; nutritional value; seed oil content; ds.
                                                                                                                                                                                                                  Clone TXS.GFP-IRESmp-CP containing IRES DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     construct comprising a bicistronic message with an intervening IRES. The constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site upstream of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The polynucleotide and vectors of the invention are useful for directing rapid and high-level expression of foreign genes in mature, differentiated, plant tissue. These are particularly useful in protein replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the SC197 containing an
                                                                                                                    Synthetic
                                                                                                                                                                                                                                                          30-SEP-2002 (first entry)
                                                                                                                                                                                                                                                                                                                             ABQ76061 standard; DNA; 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 181 BP; 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 internal ribosome entry site (IRES) nucleotide sequence, an open reading frame (ORF1) encoding a peptide and an ORF2 encoding a viral protein, where the IRES is located between ORF1 and ORF2. The novel polynucleotides of the invention are used in the construction of a recombinant potato virus X-based viral vector containing a nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alterthat it contains the containers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention describes a novel isolated polynucleotide comprising an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Fig 4; 33pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the oil content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JAN-2001; 2001US-0758962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-JAN-2002; 2002WO-US01123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BIOS-) BIOSOURCE GENETICS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 100.
mes 43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                   GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGATTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            region described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pogue GP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22.9%; Sc.
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; 28 C; 53 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Toth RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 43; DB; Pred. No. 2.8:0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chapman S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 24;
2.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carr
                                                                                                                                                                                                                                                                                                                                                                                                                   43
                                                                                                                                                                                                                                                                                                                                                                                                                                                  43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         an open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             improve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) of
The
```

```
RESULT 8
ABV36222/c
ID ABV36222 standard; cDNA; 444 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             recombinant potato virus x-based viral vector containing a nucleic acid construct comprising a bicistronic message with an intervening IRES. The Constructs are used in a method for regulating the rate at which a virus infection spreads in a host. Regulation is achieved by placing the nucleic acid construct comprising an internal ribosomes entry site of construct of a coat protein gene, where the IRES is chosen by the rate of infection of the viral vector on a host in the presence of that IRES. The CC polynucleotide and vectors of the invention are useful for directing rapid and high-level expression of foreign genes in mature, differentiated, plant tissue. These are particularly useful in protein replacement therapy, or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter the oil content of the seed. This sequence represents a fragment of the clone TXS.GFP.IRESmp-CP containing an IRES region described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                           17-FEB-2000;
16-MAR-2000;
25-MAY-2000;
                          09-JUN-2000;
                                                                                                                                                                                                                                 Human; prostate pharmacogenomic
                                                                                                                                                                                                                                                                                 Human prostate expression marker cDNA 36213
                                                                                                                                                                                                                                                                                                              16-SEP-2002 (first entry)
                                                                                                        20-FEB-2001; 2001WO-US05171.
                                                                                                                                                                     WO200160860-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            frame (ORF1) encoding a peptide and an ORF2 encoding a viral protein, where the IRES is located between ORF1 and ORF2. The novel polynucleotides of the invention are used in the construction of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes a novel isolated polynucleotide comprising an internal ribosome entry site (IRES) nucleotide sequence, an open readi
                                                                                                                                         23 - AUG - 2001
                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polypeptides contained in plant virus expression vectors, as gene expression tools, in protein replacement therapy or for intervening in a metabolic pathway to improve the nutritional value of a crop or alter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Santa-Cruz S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-JAN-2001; 2001US-0758962
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BIOS-) BIOSOURCE GENETICS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Similarity
35; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             content of seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 BP;
                        2000US-183319P.
2000US-189862P.
2000US-207454P.
2000US-211314P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pogue
                                                                                                                                                                                                                                                   cancer;
                                                                                                                                                                                                                                    marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 A; 14 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GP,
                                                                                                                                                                                                                                 cytostatic; carcinogen; pharmacodyanamic marker;
gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Toth RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28 G; 50 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chapman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABV45268/c
                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                     17-FEB-2000;
16-MAR-2000;
25-MAY-2000;
                                                                            09-JUN-2000;
18-JUL-2000;
13-DEC-2000;
                                                                                                                                                                                                                                                                                                                                Human prostate expression marker cDNA 45259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated nucleic acid molecule (I) comprising a nucleotide sequence given in Tables 1-9 (ABV00010-ABV62213) of the specification or its complement. (I) is useful for:

(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate cancer in a patient;
                        Schlegel R,
                                                                                                                                                                            20-FEB-2001;
                                                                                                                                                                                                                                   WO200160860-A2
                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                      Human; prostate cancer; cytostatic; carcinogen; pharmacodyanamic marker; pharmacogenomic marker; gene; ss.
                                                                                                                                                                                                                                                                                                                                                             16-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                         ABV45268;
                                                                                                                                                                                                                                                                                                                                                                                                                   ABV45268 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 444 BP; 91 A; 124 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 7497-7498; 11750pp; English.
                                                                                                                                                                                                        23-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (e) selecting a composition for inhibiting prostate cancer in a patient;(f) assessing the prostate cell carcinogenic potential of a compound;(g) determining whether prostate cancer has metastasized in a patient;(h) assessing the aggressiveness or indolence of prostate cancer in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated nucleic acid molecule associated with cancerous state of prostate cells and correlating with presence of prostate cancer, useful for detecting presence of prostate cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-662795/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schlegel R,
                                                  (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (d) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is also useful as a pharmacodyanamic or pharmacogenomic marker.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18.6%;
1 Similarity 100.0%;
35; Conservative
                                                                            2000US-207454P.
2000US-211314P.
2000US-219007P.
2000US-255281P.
                        Endege WO,
                                                                                                                                  2000US-183319P.
2000US-189862P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Endege WO,
                                                                                                                                                                            2001WO-US05171
                                                                                                                                                                                                                                                                                                                                                          (first entry)
                        Monahan JE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Monahan JE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 35; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113 G; 116 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 23;
2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 444;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

WPI;

```
RESULT 10
ABV49873/c
ID ABV498
XX ABV498
XX BY498
XX Human
XX Human
XX Homo s
XX PATEL
PT 23-AUC
YA 23-AUC
YA 23-AUC
YA 23-AUC
XX 11-FEE
PR 11-FEE
PR 15-MAI
PR 25-MAI
PR 18-JUJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                       17-FEB-2000;
16-MAR-2000;
25-MAY-2000;
09-JUN-2000;
                                               Novel isolated nucleic acid molecule associated with cancerous state prostate cells and correlating with presence of prostate cancer, used for detecting presence of prostate cancer, stage of prostate cancer
                                                                                                                                                                                                       Schlegel R,
                                                                                                                                                                                                                                                      (MILL-) MILLENNIUM PREDICTIVE MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200160860-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; prostate 
pharmacogenomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABV49873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABV49873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid molecule (I) comprising a nucleotide sequence given in Tables 1-9 (ABV00010-ABV62213) of the specification or its complement. (I) is useful for:
(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence

    (e) selecting a composition for inhibiting prostate cancer in a patient;
    (f) assessing the prostate cell carcinogenic potential of a compound;
    (g) determining whether prostate cancer has metastasized in a patient;
    (h) assessing the aggressiveness or indolence of prostate cancer in a

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (d) assessing the efficacy of a therapy for inhibiting prostate
in a patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancer in a patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel isolated nucleic acid molecule associated with cancerous state of prostate cells and correlating with presence of prostate cancer, useful for detecting presence of prostate cancer stage of prostate cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            also useful as a pharmacodyanamic or pharmacogenomic marker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     444
                                                                                                                                                                                                                                                                                                     2000US-183319P.
2000US-189862P.
2000US-207454P.
2000US-211314P.
2000US-2119007P.
2000US-255281P.
                                                                                                                                                                                                       Endege
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US05171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8960; 11750pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression marker cDNA 49864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cancer; cytostatic; carcinogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA;
                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; 124 C; 113 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        514
                                                                                                                                                                                                       Monahan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pharmacodyanamic marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 444;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

۲.

Page

9722-9723; 11750pp; English

mutual action of rec polynucleotide. The The invention relates to

lates to the accessory factor TIP30-32.12 polypeptide regulator proteins HIV-1 Tat, and its associated the polynucleotide, polypeptide and its antagonist are

tide, polypeptide and its associated and its antagonis.

CDNA

ioi

Claim

6; Page 27-28 (Disclosure); 35pp;

Chinese

```
RESULT 11
ABK52453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                Accessory factor TIP30-32.12 polypeptide for mutual proteins HIV-1 Tat and polynucleotide encoding it,
                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                 WPI;
                                                                                                                                                     Mao
                                                                                                                                                                                                30-JUN-2000;
                                                                                                                                                                                                                     30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                               Accessory factor TIP30-32.12; regulator protein; cancer; human immunodeficiency virus; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated nucleic acid molecule (I) comprising a nucleotide sequence given in Tables 1-9 (ABV00010-ABV62213) of the specification or its complement. (I) is useful for:

(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate
                                                                                                                                                                                                                                           16-JAN-2002.
                                                                                                                                                                                                                                                                CN1331116-A.
                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                          (BODE-)
                                                                                                                                                                                                                                                                                                                                                                                                   Accessory
                                                                                                                                                                                                                                                                                                                                                                                                                         27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK52453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK52453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (f)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (d) assessing the efficacy of a therapy for inhibiting prostate cancer
in a patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancer in a patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        selecting a composition for inhibiting prostate cancer in a patient; assessing the prostate cell carcinogenic potential of a compound; determining whether prostate cancer has metastastzed in a patient; assessing the aggressiveness or indolence of prostate cancer in a
                                                                                                                    2002-316398/36.
DB; AAU79300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCGACGGTATCGATAAGCTTGATATCGAATTCGT
                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  also useful as a pharmacodyanamic or pharmacogenomic marker.
                                                                                                                                                     Xie Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
35; Conserv
                                                                                                                                                                         BODE GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                   factor Tip30-32.12
                                                                         immunopathy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                2000CN-0116960
                                                                                                                                                                                                                     2000CN-0116960
                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP; 108 A; 123
                                                                                                                                                                                                                                                                                                           Location/Qualifiers 124..1002
                                                                                                                                                                                                                                                                                     /product=
                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                          DEV CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA; 1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18.6%;
                                                                                                                                                                                                                                                                                    "Accessory factor TIP30-32.12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score; Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; 125 G;
                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                          SHANGHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               158 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 23;
2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                             HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                 for treating
                                                                                                                                                                                                                                                                                                                                                                             Tat;
                                                                                of regulator ating e.g.
                                                                                                                                                                                                                                                                                                                                                                          immunopathy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

encoding

the accessory factor TIP30-32.12

```
밁
                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SXS
                                                 Matches
                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                  This is the nucleotide sequence of the gene encoding the novel G-protein coupled receptor polypeptide (GPR14), used in the method of the invention. Human GPR14 polypeptides and polynucleotides can be used in the treatment of infections such as bacterial, fungal, protozoan and viral infections. Agonists and antagonists can be used to treat
                                                                                                  Sequence 2126
                                                                                                                                                                                                             Claim 3; Fig 1; 23pp; English.
                                                                                                                                                                                                                                    New DNA sequence encoding G-protein coupled receptor polypeptide GPR14 - and corresponding polypeptide, agonists, antagonists, etc
                                                                                                                                                                                                                                        GPR14
                                                                                                                                                                                                                                                                             P-PSDB;
                                                                                                                                                                                                                                                                                         WPI; 1998-429680/37
                                                                                                                                                                                                                                                                                                                  Bergsma
                                                                                                                                                                                                                                                                                                                                                                 27-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                          18-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                   19-AUG-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                            EP859052-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G-protein coupled receptor polypeptide; GPR14; human; fungal infection; bacterial infection; protozoan infection; viral infection; agonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV41999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV41999 standard;
                                                                                                                                                                                                                                                                                                                                          (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1353
30
                                                             Local
             1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                тосат
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCGACGGTATCGATAAGCTTGATATCGAATTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GPR14
                                                 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35; Conserv
                                                           Similarity
                                                                                                                                                                                                                                                                                                                  Д
,
                                                                                                                                                                                                                                                                                                                                        SMITHKLINE BEECHAM CORP
                                                                                                                        associated with Human GPR14 imbalance.
                                            18.6%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                  Shabon
                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B₽;
                                                                                                                                                                                                                                                                                                                                                                   97us-0789354
                                                                                                                                                                                                                                                                                                                                                                                          97EP-0309252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers 694..1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product=
                                                                                              317 A; 763 C; 669 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    412 A; 329 C; 294 G; 318 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                  G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2126
                                               0;
                                               Score 35; DB; Pred. No. 1.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor polypeptide) gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ.
                                                                                               377 T; 0 other;
                                                         DB 19;
1.8e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.9e-07;
                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1353;
                                                                       Length
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                       2126;
                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

RESULT

RESULT 14
AAK99298
ID AAKS

AAK99298 standard;

cDNA; 3236

밁 Š

```
Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JAN-1999;
09-FEB-1998;
10-APR-1998;
                                                                                                                                        arrhythmias, restenosis, hypertension and hypotension, pulmonary d
fibrotic vasculopathies, cerebrovascular events, neurogenic
inflammation/migraine, haematopoietic disorders, adult respiratory
                                                                                                                                                                          This sequence encodes the human G protein-coupled receptor, GPR14, invention. Human GPR14, polypeptide and polynucleotides are useful methods for treatment of, e.g. ischemic coronary artery disease, attheroscierosis, metabolic diseases, CHF/myocardial dysfunction,
                                                                                           Sequence 2126 BP; 317 A; 763 C; 669 G; 377 T; 0 other;
                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                 agonists
                                                                                                                                                                                                                                                                             Human G
                                                                                                                                                                                                                                                                                                    P-PSDB;
                                                                                                                                                                                                                                                                                                               WPI; 1999-527305/44.
                                                                                                                                                                                                                                                                                                                                       sarau
                                                                                                                                                                                                                                                                                                                                                Chambers J,
                                                                                                                                                                                                                                                                                                                                                                                               (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arrhythmia; restenosis; hypertension; hypotension; pulmonary fibrotic vasculopathy; cerebrovascular event; neurogenic inf. haematopoietic disorder; adult respiratory distress syndrome
                                                                                                                                 distress syndrome (ARDS), cancer, autoimmune diseases, etc.
                                                                                                                                                                                                                                                                                                                                                             Aiyar NV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-AUG-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09940192-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer; autoimmune disease; therapy; human; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        atherosclerosis; metabolic disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GPR14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human GPR14 coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ11174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ11174 standard;
                                                                                                                                                                                                                                                                                                                                                                                     (SMIK
 30
GTCGACGGTATCGATAAGCTTGATATCGAATTCGT
                      GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                      4; Fig 1; 64pp; English
                                                                                                                                                                                                                                                                                                                                       HM,
                                                                                                                     used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                   SMITHKLINE BEECHAM CORP.
SMITHKLINE BEECHAM LAB PHARM
SMITHKLINE BEECHAM PLC.
                                                                                                                                                                                                                                                             protein-coupled receptor GPR14,
s and antagonists
                                                          Similarity
                                                                                                                                                                                                                                                                                                    AAY32920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein-coupled receptor; ischaemic coronary artery di
lerosis; metabolic disease; CHF/myocardial dysfunction;
                                                                                                                                                                                                                                                                                                                                    , Douglas
Shabon U,
                                                                                                                                                                                                                                                                                                                                                          Al-Barazanji K,
                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0232857.
98US-0074075.
98US-0058725.
                                                                                                                   identify agonists and antagonists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US01634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 694..1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA;
                                                         18.6%;
                                                                                                                                                                                                                                                                                                                                    nji K, Ames RS,
SA, Foley JJ,
Willette RN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2126
                                              0
                                                         Score 35;
Pred. No.
                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHF/myocardial
                                                                                                                                                                                                                                                                                                                                                Arnold Gout B,
                                                                    DB 20;
                                                                                                                                                                                                                                                                           useful for identifying
64
                                              .8e-07;
                                                                                                                                                                                                                                                                                                                                                AR, Bergsma
Khandoudi N;
                                                                   Length
                                                                                                                   of human and
                                              Indels
                                                                                                                                                                   pulmonary disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inflammation;
                                                                                                                                                                                                                                                                                                                                                           Ď,
                                              0
                                                                                                                                 The methods
                                                                                                                   rat GPR14
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        migraine;
                                                                                                                                                                                                      i c
                                                                                                                                                                                                                the
                                              0
```

```
RESULT 15
     FFFEX OXXXX DXXXX ID
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                 Query Match
                       CDS
                                                                                                                                                                                                                                                                                                      The invention relates to a novel protein of the human cancer suppres gene 98, the encoding polynucleotide, a process for preparing the polynucleotide by DNA recombination, an antagonist to the polynucleotide by DNA protein is useful for treating diseases such as cancer, HIV infection, etc. This polynucleotide sequence represents cDNA of the human cancer suppressor gene 98 of the invention.
                                                     Homo
                                                                                           Human
                                                                        Human; X2 theca
                                                                                                               14-AUG-2002
                                                                                                                                   ABN83030;
                                                                                                                                                     ABN83030 standard; cDNA;
                                                                                                                                                                                                                                                                                      Sequence 3236 BP;
                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Page 25-27 Disclosure; 37pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                   Polypeptide-human cancer suppressor gene 98, useful for treating diseases such as cancer and HIV infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mao Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CN1328030-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytostatic; anti-HIV; human; cancer suppressor gene 98; antagonist; DNA recombination; cancer; HIV infection; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BODE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAK99298;
                                                                                                                                                                                                       31
                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                    GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                2002-258228/31.
DB; AAO20441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                           X2 theca
                                                                                                                                                                                                                                               35
;
                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xie Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BODE GENE
                                                                                                                                                                                                                                            18.6%; Score 35; DB larity 100.0%; Pred. No. 1.0 Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human cancer suppressor gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000CN-0116437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000CN-0116437
                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                           repressor 10.34 cDNA.
                     Location/Qualifiers 3574..3858
                                                                    repressor 10.34; repressor; immunopathy; gene;
/*tag= a
/product= "x2 theca repressor 10.34"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/product= "Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEV
                                                                                                                                                                                                                                                                                     892 A; 638 C;
                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CO LTD SHANGHAI.
                                                                                                                                                     3905
                                                                                                                                                     ₽P
                                                                                                                                                                                                                                                                                  745 G; 961 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human cancer suppressor gene
                                                                                                                                                                                                                                            DB 24; 1
1.8e-07;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98
                                                                                                                                                                                                                                                               Length 3236;
                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                cancer suppressor reparing the
                                                                                                                                                                                                                                            0;
                                                                       98.
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                           0,
```

```
밁
                      ş
                                           Matches
                                                               Query Match
                                                                                                      The sequence encodes the novel human X2 theca repressor 10.34 polypeptide of the invention. The polypeptide is useful for treating diseases such as immunopathy. The antagonist of the polypeptide and its medical action, and the application of the polynucleotide are also disclosed.
                                                                                                                                                                                  Polypeptide-human X2 coding it -
                                                                                   Sequence 3905 BP; 1245 A; 731 C; 701 G; 1228 T; 0 other;
                                                                                                                                                              Claim 6; Page 25-27;
                                                                                                                                                                                                                   P-PSDB; ABB81691.
                                                                                                                                                                                                                                                                                            26-JUN-2000; 2000CN-0116749
                                                                                                                                                                                                                                                                                                                                       16-JAN-2002
                                                                                                                                                                                                                              WPI; 2002-292849/34.
                                                                                                                                                                                                                                                  Mao Y,
                                                                                                                                                                                                                                                                                                                  26-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                            CN1331139-A
                                                                                                                                                                                                                                                                        (BODE-) BODE GENE DEV CO LTD SHANGHAI.
  31
Local Similarity 100.
es 35; Conservative
                                                                                                                                                                                                                                                   Хiе
                                                                                                                                                                                                                                                                                                                   2000CN-0116749
                                     18.6%; but
100.0%; Pr
                                                                                                                                                             34pp; Chinese.
                                                                                                                                                                                           theca repressor 10.34 and polynucleotide for
                                          Score 35; DB; Pred. No. 1.8
                                                    1.8e-07;
                                                               DB 24;
                                                              Length 3905;
                                          Indels
                                          0;
                                          Gaps
```

Search completed: February 19, 2003, 07:13:20 Job time : 231 secs

0;

1, Appli
25, Appli
26, Appli
27, Appli
28, Appli
29, Appli
40, Appli
41, Appli
42, Appli
43, Appli
44, Appli
44, Appli
45, Appli
46, Appli
47, Appli
48, Appli
49, Appli
40, Appli
41, App

```
Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is derived by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 February 19, 2003, 07:08:12; Search time 45 Seconds (without alignments) 1281.227 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-758-962-1
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    441362 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
Issued_Patents_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gtcgacggtatcgataagct.....gaagaaagagctcaccatgg 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/BCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20000000000
                                             1638
1638
1638
1638
1638
1679
1703
1703
2031
2031
2185
22185
22185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153338381 residues
          PCT-US95-10403-1
US-09-493-2985-11
US-09-838-219B-8
US-09-838-219B-8
US-09-233-354A-8
US-09-233-752A-8
US-09-402-036-8
US-09-9402-036-8
US-09-1402-036-8
US-09-1402-036-8
US-09-149-476-155
US-08-467-948A-3
US-08-481-206-13
                                                                                                                                                                                                                                                                                                                                 US-08-789-354-1

US-09-110-937-1

US-09-058-7258-1

US-09-232-857-1

US-09-103-478-4

US-09-103-9310-4

US-09-133-9310-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  882724
                          Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                             Sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                 Seq
                                                                                                                                                                                                                                                                  Seq
                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                   uence
                                                                                                                                                                                                                                    uence
                                                                                                                                                                                                                                                  uence
                                                                                                                                                                                                                                                                    uence
                                                                                                                                                                                                                                                                                    uence
                                                                                                                                                                                                                                                                                                    uence
                        B 1, Appli

1, Appli

2, Appli

4, Appli

4, Appli

3, Appli

3, Appli

3, Appli

6, Appli

8, Appli

8, Appli

8, Appli

8, Appli

8, Appli

9, Appli

11, Appli

11, Appli

12, Appli

13, Appli

14, Appli

155, Appli

155, Appli

16, Appli

17, Appli

18, Appli

19, Appli

10, Appli

11, Appli

12, Appli

13, Appli

14, Appli

15, Appli

16, Appli

17, Appli

18, Appli

19, Appli

10, Appli

11, Appli

11, Appli

12, Appli

13, Appli

14, Appli

15, Appli

16, Appli

17, Appli

18, Appli

19, Appli

10, Appli

11, Appli

11, Appli

12, Appli

13, Appli

14, Appli

15, Appli

15, Appli

15, Appli

16, Appli

17, Appli

18, Appli

19, Appli

10, Appli

11, Appli

12, Appli

13, Appli

14, Appli

15, Appli

                                                                           ; STRANDEDNESS: sii
; TOPOLOGY: linear
; MOLECULE TYPE: CDNI
US-08-789-354-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 1
US-08-789-354-1
          Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Shabon, Us
APPLICANT: Bergsma, I
TITLE OF INVENTION: C
                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/789,354
FILING DATE: 27-JAN-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
FILING DATE:
                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Han, William T
REGISTRATION NUMBER: 34,344
REFERREZ/DOCKET NUMBER: P506
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline
STREET: 709 Swedeland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: King of Prussia STATE: PA
                                                                                                                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 19406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                              LENGTH:
          Similarity
35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Application US/08789354 5851798
                                                                                                                                            nucleic acid
                                                                                                                                                              2126 base pairs
                                                                                                                                                                                                                                  610-270-4026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117.66
117.66
117.66
117.66
117.66
117.66
117.66
117.66
117.66
                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Derk
Cloning
        18.6%; Score 35; DB
100.0%; Pred. No. 2e
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ceptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Road Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-443-861-1
US-09-123-6814-1
US-09-203-6814-1
US-09-462-645C-25
US-09-462-645C-26
US-09-462-645C-26
US-09-685-603B-21
US-09-085-603B-21
US-09-085-603B-21
US-09-116-492A-26
US-09-116-492A-39
US-08-405-271A-14
US-08-485-271A-14
US-08-928-799A-10
US-08-928-799A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of Human GPR14 Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                          DB 2;
2e-08;
                                          Length 2126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
```

Result No.

Score

000000

0

Gaps

0

00000000

Minimum Maximum

B B

seq

Word

size

, **. .**

Searched

Scoring table:

Title:

OM nucleic -

Sequence:

Perfect score:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-110-937-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 2126
TYPE: DNA
ORGANISM: HOMO SAPIENS
5-09-110-937-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/09058725B Patent No. 6133420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/09110937A Patent No. 6005074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/110,937A CURRENT FILING DATE: 1998-07-06 NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-058-7258-1
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT: SHABON, USMAN
PPLICANT: BERGSMA, DERK
ITLE OF INVENTION: CLONING OF HUMAN GPR14 RECEPTOR
ILE REFERENCE: P50610-1
                                                                                                                                                                                                                            COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/058,725B
FILING DATE: APT11 10, 1998
                                                   REGISTRATION NUMBER: 34,344
REFERENCE/DOCKET NUMBER: GPI
FELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline
STREET: 709 Swedeland
                                                                                                                             APPLICATION NUMBER: 08/789,354
FILING DATE: 27-CAN-1997
FTORNEY/AGENT INFORMATION:
NAME: Han, William T.
                                                                                                                                                                                                        RIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: King of Prussia
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LE OF INVENTION: A Method of Finding Angonist
LE OF INVENTION: and Antagonist To Human and Rat GPR 14
BER OF SEQUENCES: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                   19406
                                                                                                                                                                                                                                                                                                                                                                                                                                    PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Foley, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ames, Robert
                                                                                                                                                                                                                                                                                                                                        IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.6%; Score 35; DB 3; 100.0%; Pred. No. 2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Beecham Corporation Road
                                                                                            GP50005-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 2126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tent No.
                               SEQUENCE CHARACTERISTICS:
```

```
RESULT 4
US-09-232-857-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 18.6%;
Best Local Similarity 100.0%;
Matches 35; Conservative (
INFORMATION FOR SEQ ID NO:
                                                                                                                       APPLICATION NUMBER: 08/789,354
FILING DATE: 27-JAN-1997
APPLICATION NUMBER: 60/074,075
FILING DATE: 09-FEB-1998
APPLICATION NUMBER: 09/058,725
FILING DATE: 10-APR-1998
ATTORNEY/AGENT INFORMATION:
                                             NAME: Prestia, Paul F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 2126 base pairs
                                                                                                                                                                                                                                 RIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM CON OPERATING SYSTEM:
                                                                                                                                                                                                                                                 FILING DATE: 1
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 64
                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                 ELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +
                                                                                                                                                                                                                                                                                                                                                                                          19482
                                                                                                                                                                                                                                                                                                                                                                                                                                  Valley Forge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                       PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09232857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      P.O.
                                610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                          IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ratner & Prestia
O. Box 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROMANIC, ANNE CHANDOUDI, NAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIYAR, NAMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLEY, JAMES J.
ARAU, HENRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAMBERS, JON K.
HABON, USMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ILLETTE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OUGLAS, STEPHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BARAZANJI, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                 15-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BERNARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A METHOD OF FINDING AGONIST AND ANTAGONIST TO HUMAN AND RAT GPR14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DERK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROBERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NASSIRAH
                                                                                                                                                                                                                                                                              US/09/232,857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KAMAL
                                                                             GP-50005-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 35; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
. 2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

126 base pairs

```
; MOLECULE TYPE: US-09-103-478-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-103-478-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: US-09-232-857-1
                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                  TELEFAX: (415) 576-030
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tent No.
                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 38,440
REFERENCE/DOCKET NUMBER: 023070-077611US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/804,534 FILING DATE: 21-FEB-1997 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: [
FILING DATE: 19-FEB-]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                          LENGTH: 7560 base pai
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: San Francisco
STATE: Calofornia
                1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                              Loca1
                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 24-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/09/103,478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
TOPOLOGY: linear
GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                 35; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94111-3834
                                                                                                                                                                                                                                                                                                                                 Einhorn, Gregory P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Calofornia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09103478
                                                                                                                                                                                                       7560 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: Townsend and Townsend and Crew LLP Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohto, Masa-aki
Goldberg, Robert B.
Fischer, Robert L.
NVENTION: LEAFY COTYLEDON1 Genes and Their Uses
SEQUENCES: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lotan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Harada,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                      (415) 576-0200
415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                     19-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                         DNA (genomic)
                                                            18.6%; Score 35;
100.0%; Pred. No.
Live 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.6%; Score 35; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     US 09/026,221
                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                             DB 4; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3;
2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2126;
                                                                                          Length 7560;
                                                             Indels
                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Watches 35; Conserve
                                                                                                                                                                                                                                                                                                                                                                                  US-08-983-409-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-193-931C-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
US-09-193-931C-4
                                                                                                                                                                                                                                                                                                                                    Sequence 3, Application US/08983409 Patent No. 6150586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
LENGTH: 7560
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: The Regents of the University of California TITLE OF INVENTION: LEARY COTYLEDONI Genes and Their Uses FILE REFERENCE: 023070-077620 CURRENT APPLICATION NUMBER: US/09/193,931C CURRENT FILING DATE: 1998-11-17 PRIOR APPLICATION NUMBER: US 09/103,478 PRIOR APPLICATION NUMBER: US 09/103,478 PRIOR FILING DATE: 1998-06-24 PRIOR APPLICATION NUMBER: US 09/026,221
                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-02-19
PRIOR APPLICATION NUMBER: US 08/804,534
PRIOR FILING DATE: 1997-02-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: (4427)..(5054)
OTHER INFORMATION: LEAFY COTYLEDON1 (LEC1)
NAME/KEY: modified_base
LOCATION: (1) ...(7560)
OTHER INFORMATION: n = g, a, c or t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 29
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            itent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (2430)..(4427)
OTHER INFORMATION: corresponds to LEC1 promoter in SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: promoter LOCATION: (2430)..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
LOCATION: (2430)..(5824)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: 7.4 kb genomic wild-type fragment containing LEC1
OTHER INFORMATION: gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT: Harada, John
PPLICANT: Lotan, Tamar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: corresponds
                                                                                                                                                                                                                          APPLICANT: Slabas, Antoni
APPLICANT: Elborough, Kie
TITLE OF INVENTION: Plant
TITLE OF INVENTION: Carbo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EATURE:
                                                                                                                                                                                     NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                          STREET: 1800 Con-
CITY: Wilmington
STATE: DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                53 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 87
                                                                                    COUNTRY:
                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35

    Application US/09193931C
    6320102

                                                                   19850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goldberg, Robert B. Fischer, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ohto, Masa-aki
                                                                                                                                                 1800 Concord Pike
                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18.6%; Score 35; llarity 100.0%; Pred. No. Conservative 0; Mismatci
                                                                                                                                                                      Zeneca
                                                                                                                                                                                                                                   Carboxylase Biotin Carboxyl
                                                                                                                                                                                                                            Plant Gene Encoding Acetyl Coenzyme A
Parhovulage Biotin Carboxyl Carrier Protein
                                                                                                                                                                                                                                                                          Kieran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ៥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.8e-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 7560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
CT-US95-10403-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: CDNA
JS-08-983-409-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/291,93
FILING DATE: 16 August 1994
CLASSIFICATION:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: CLADAIA, Michele A.
REGISTRATION NUMBER: 33,851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equence 1, Application PC/TUS9510403
TELEFAX: (202) 371-2540
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                               REFERENCE/DOCKET NUMBER: 0609.408PC00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)_371_2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB96/01894
FILING DATE: 06-AUG-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: GB 951
FILING DATE: 18-AUG-1995
TTORNEY/AGENT INFORMATION:
NAME: Hohenschutz, Liza D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 45
                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US95/10403 FILING DATE: 15 August 1995
                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1100 New CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 33,712
REFERENCE/DOCKET NUMBER: SEE45001/UST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                          20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                          D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Sterne, Kessler, Goldstein and Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The General Hospital Corporation VENTION: GA4 DNA, Protein and Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (302)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PC-DOS/MS-DOS
                                                                                                                                                                              08/291,939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GB 9516961.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/983,409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 34; DB 3; I
Pred. No. 6.6e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
```

```
; TOPOLOGY: 11; MOLECULE TYPE: US-09-183-253-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT-US95-10403-1
                 Query Match
Best Local :
     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                             TELEX: 846169
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 9817907.0
                                                                                                                                                                                    TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                           STRANDEDNESS:
                                                                                                                                                                                                              REGISTRATION NUMBER: 23,031 REFERENCE/DOCKET NUMBER: GP
                                                                                                                                                                                                                         NAME: Prestia, Paul REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                         FILING DATE: 17-AUG
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 9817
FILING DATE: 17-AUG-1998
                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/OFILING DATE: 30-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3, Application US/09183253
o_ 6043054
                                                                                                                                                                                                                                                                                                                                                                                                                                                  19482
    Similarity 100
34; Conservative
                                                                                          nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 100
34; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Valley Forge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽.0.
                                                                                                                     1318 base pairs
                                                                                                                                                                       610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STAMMERS, MELANIE
/ENTION: NOVEL COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                              FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                        IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   107..1183
                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ratner
                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                        Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Box 980
18.-
100.08; F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
              18.1%; Score 34; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18.1%;
                                                                                                                                                                                                                                                                            60/075,306
                                                                                                                                                                                                                                                                                                                                                       uS/09/183,253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prestia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                            GP-70395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34;
Pred. No.
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                               DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5; L
                6.4e-08;
                            Length 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1270
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34

GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1285

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-838-219B-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) ORGANISM: mouse US-09-492-985-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.
34; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Arr 58770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: FastSEQ for Windows Version 4.0. SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11, Application US/09492985 Patent No. 6376240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT FILING DATE: 2000-01-27
EARLIER APPLICATION NUMBER: 60/
EARLIER FILING DATE: 1999-01-27
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/492,985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-492-985-11/c
                                                          FILING DATE:
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/463,483
FILING DATE: 06-JUN-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Song, An M.
APPLICANT: Chen, Ya-Fen
APPLICANT: Krensky, Alan M.
ITTLE OF INVENTION: RFLAT-1: A Transcription Factor That
ITTLE OF INVENTION: Activates RANTES Gene Expression
FILE REFERENCE: SUN-113P
                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30B CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1443 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1410
                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                               APPLICATION NUMBER: US 0 FILING DATE: 09-SEP-1994
                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: CIBA GLACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                   DUNTRY:
                                                                                                                                                                                                                                                                                                  10532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1471
                                                                                                                                                                                                                                                                                                                                                   Hawthorne
                                                                                                                                                                                                                                                                                                                                     ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08838219B
                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Warren, Gregory W
Koziel, Michael G
Mullins, Martha A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Duck, Nicholas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kostichka, N. Kristy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATION:
                                                                                                                                                                                                                                                                                                                                                                                 CIBA-GEIGY Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                          A No.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Control of Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18.1%; Score 34; 100.0%; Pred. No.
                                                   US 08/314,594
US 08/218,018
                                                                                                                                                                         US/08/838,219B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/117,576
                                                                                                                                                                                                                                                                                                                                                                                                                                                    5877012el Class of Proteins for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                       Pests
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.4e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
US-09-233-336A-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-838-219B-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tent No.
                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                          PRIOR APPLICATION DATA:
                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30B CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1633 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1600
                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 1638 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 919-541-8582
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: 2..1191
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: cl
                                                                                                                                                                                                                                                                                                                            ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 23-MAR-PRIOR APPLICATION DATA:
                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local 34;
                                                                       FILING DATE:
CLASSIFICATION:
APPLICATION NUMBER:
                                          APPLICATION NUMBER:
                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                        COUNTRY: UZIP: 10532
                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 40,403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 25-MAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPOLOGY:
               APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Application US/09233336A
6107279
                                                                                                                                                                                                                                                 Hawthorne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                     ΝY
                                                                                                                                                                                                                                                                 7 Skyline
                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                              wesai, Nalini M
Kostichka, N. Kristy
Duck, Nicholas B
                                                                                                                                                                                                                                                                                                                                                                                                                                         Warren, Gregory W
Koziel, Michael G
Mullins, Martha A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     919-541-8689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             Nye, Gordon J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                             CIBA-GEIGY Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gary M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                Brian
                                                                                                                                                                                                                                                                                                                      A No. 6107279el Class of Proteins for Control of Plant Pests
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18.1%;
                                                                                                                                                                                                                                                                 Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product= "Translation of cDNA
encoding VIP3A(a) receptor"
                                                                                                US/09/233,336A
                                         08/838,219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 08/037,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 34; DB 2; Pred. No. 6.3e-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  င္ပင္ပင
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.3e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

US 08/314,594

```
US-09-233-336A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity Matches 34; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )9-233-752A-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 919-541-8689
[NFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1633 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1600
                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                   APPLICANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                   PPLICANT
                                                                                                                                                                                                                                                                                                                                                                 PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: 2..1191
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIOR APPLICATION DATA:
IOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTORNEY/AGENT INFORMATION:
NAME: Pace, Gary M
                                  CLASSIFICATION:
                                                                  APPLICATION NUMBER:
                                                                                                                                                                                 COUNTRY: USA
ZIP: 10532
                                                                                                                                                                                                                                 CITY: Hawthorne
                                                                                                                                                                                                                                  ADDRESSEE: CIDA CONTROL OF IVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 1638 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: PACE, GAIY M.
REGISTRATION NUMBER: 40,403
REFERENCE/DOCKET NUMBER: CGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 25-MP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LECOMMUNICATION INFORMATION: 919-541-8582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Application US/09233752A
6137033
                                                                                                                                                                                                                NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                             Desai, Nalini M
Kostichka, N. Kristy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Koziel, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                              CIBA-GEIGY Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JMBER: US 08/037,057
25-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                 Nicholas
                                                                                                                                                                                                                                                                                                               Control of Plant Pests
                                                                                                                                                                                                                                                                                                                             A No. 6137033el Class of Proteins for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product= "Translation of cDNA
encoding VIP3A(a) receptor"
   08/838,219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/218,018
                                                                US/09/233,752A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGC 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 3; I
6.3e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-402-036-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                           FILE REFERENCE: S-21284C
CURRENT APPLICATION NUMBER: US/09/402,036
CURRENT FILING DATE: 2000-02-08
PRIOR APPLICATION NUMBER: PCT/EF98/01952
PRIOR FILING DATE: 1998-04-02
PRIOR FILING DATE: 1998-04-02
PRIOR FILING DATE: 08/838,219
                    PRIOR FILING DATE: 1994-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1994-0
                                                                                                                                           PRIOR APPLICATION NUMBER: 08/838,219
PRIOR FILING DATE: 1997-04-03
PRIOR APPLICATION NUMBER: 08/832,263
PRIOR APPLICATION NUMBER: 08/832,263
PRIOR PILING DATE: 1997-04-03
                                                                                       PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1995-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                         PPLICANT: Nye, Gordon
TILE OF INVENTION: Plant Pest Control
TLE REFERENCE: S-21284C
                                                                                                                                                                                                                                                                                                                                                                                                                                            tent No. 6291156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1633 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: 2..1191 OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 2..1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                               LING DATE: 1997-
                                                                                                                                                                                                                                                                                                                                                                                                                                                            æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
NG DATE: 1994-03-24
ICATION NUMBER: 08/
                                                                    CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09402036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                         Yu, Cao-Guo
                                                                                                                                                                                                                                                                                                                                          Koziel, Michael
                                                                                                                                                                                                                                                                                                                                                          Warren, Grego
Desai, Nalini
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1638 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        919-541-8689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
E: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gary M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UMBER: US 08/037,057
25-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                       08/832,265
1997-04-03
UMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-SEP-1994
                                                    1994-09-09
                                                                                                                                                                                                                                                                                                                                                                        Gregory W.
                                                                                     1995-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18.1%; Score 34; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "Translation of cDNA
encoding VIP3A(a) receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/314,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 08/218,018
                                    08/218,018
                                                                     08/314,594
                                                                                                     08/463,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGC 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 3; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

1993-03-25

08/037,057

```
밁
                                                                                                                                                                  ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (2)..(1189)
; OTHER INFORMATION: Translation of cDNA encoding VIP3A(a) receptor
; OTHER INFORMATION: from Black cutworm
US-09-904-226-8
                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 1638
TYPE: DNA
ORGANISM: Agrotis ipsilon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-402-036-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
IS-09-904-226-8/c
                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: PCT/EP98/01952
PRIOR FILING DATE: 1998-04-02
PRIOR APPLICATION NUMBER: 08/838, 219
PRIOR FILING DATE: 1997-04-03
PRIOR APPLICATION NUMBER: 08/832, 263
PRIOR APPLICATION NUMBER: 08/832, 263
PRIOR FILING DATE: 1997-04-03
PRIOR APPLICATION NUMBER: 08/832, 265
PRIOR FILING DATE: 1997-04-03
PRIOR FILING DATE: 1997-04-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 18.1%; Score 34; DB 4; I
Best Local Similarity 100.0%; Pred. No. 6.3e-08;
Matches 34; Conservative 0; Mismatches 0;
                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 8, Application US/09904226 Patent No. 6429360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1993-03-25
NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: CDS
LOCATION: (2)..(1189)
OTHER INFORMATION: Translation of cDNA encoding VIP3A(a) receptor
OTHER INFORMATION: from Black cutworm
PPLICANT: Warren, Gregory W. PPLICANT: Desai, Nalini
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT: Koziel, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1633 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1638
TYPE: DNA
ORGANISM: Agrotis ipsilon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2001-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLICANT: Nye, Gordon
TLE OF INVENTION: Plant Pest Control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LE REFERENCE: S-21284D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1994-09-09
APPLICATION NUMBER: 08/218,018
FILING DATE: 1994-03-24
APPLICATION NUMBER: 08/037,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 08/463,483
FILING DATE: 1995-06-05
APPLICATION NUMBER: 08/314,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.0
                                                                             18.1%; Score 34; DB 4; Luilarity 100.0%; Pred. No. 6.3e-08; Conservative 0; Mismatches 0;
                                                                                                                       Length 1638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1638;
                                                                                  Indels
                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                Gaps
                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

Search completed: February 19, 2003, 08:30:42
Job time: 50 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
Sequence:
                                                                       o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                              Score
                                                                                      Query
Match Length DB ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        February 19, 2003, 07:00:11 ; Search time 1949 Seconds (without alignments) 1562.212 Million cell updates/sec
      20.2
19.1
18.6
18.6
18.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-758-962-1
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16154066 seqs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 gtcgacggtatcgataagct.....gaagaaagagctcaccatgg 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.3 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_estpl.: *
em_estro: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_estmu:*
em_estov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_esthum: *
em_estin: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_est1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_htc:*
                                                                                                                                                                                                              em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                                                                                                                            em_gss_vrt:*
em_gss_fun:*
                                                                                                                                                                                                                                     em_gss_mus:*
em_gss_other:*
                                                                                                                                                                                                                                                                 em_gss_mam:*
                                                                                                                                                                                                                                                                                                   em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                                                                                                                              em_gss_hum:*
                                                                                                                                                                                                                                                                                                                                            gb_gss:*
                                                                                                                                                                                                                                                                                                                                                         em_estom: *
                                                                                                                                                                                                                                                                                                                                                                     em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                gb_est5:*
                                                                                                                                                                                                                                                                                                                                                                                               gb_est4:*
                                                                                                                                                                                                                                                                                                                                                                                                             gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                                                                         gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                     gb_est2:*
     304
818
495
919
945
1300
  9 AU167182
13 BM141055
12 BG139700
13 BM351825
13 BM351824
13 BM351824
                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32308132
AU167182 AU167182
BM141055 ZF0441 Ze
BG139700 EST480142
BM351825 Tgzz44h01
BM351825 Tgzz44h11
BM351823 Tgzz40d09
                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                      RESULT 1
AU167182/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000
```

U	4.1	· w	8	_	0	9	00	`	10	·	4	· w	N	_	0	ø	œ	7	õ	ŭ	4	ũ	ž	ï	õ	ف	œ	.7	6	Ċī.	4	ω	ົນ	F	0	9	8	7
34	34	34	34	34	34	4.	34	34	ω 4.	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	3,4	34	34	34	34	ω 4-	34	34	34	34	34	34	34
18.1		۳.	۳.	۳.	۳.		۳.		w							.8	œ		. 8	œ	.00	œ	8			8	8	æ	œ •	ω.	œ	œ	œ	۳.	18.1	18.1	18.1	18.1
~	ຶ	O	v	v	U)	U.	u	UЛ	241	•	w	w	w	V.3	N 3	_	_	_	_	_	_	$\overline{}$		m	~	-1	•	\sim	92	92	91	89	66	54	54	53	53	52
13	10	14	10	10	10	9	10	10	10	9	10	10	10	10	10	9	10	10	10	10	10	10	10	10	12	ဖ	9	14	14	φ,	9	10	10	12	10	10	10	10
BI119516	W73983	1550	AW740378	74017	3987	AI052896	4052	4025	AW739737	77003	4028		3977	4289	3996	7770	3096	4045	4019	3982	Ę	V74304	73996	AW740238	G36046	œ	837413	Ö	082173	9	066878	15992	W62654		W17217	626	420	ï
10	BRI0035	1030050	BRI1052	BRI1019	BRI0039	SWBmL3SE	BRI104	BRI1027	W739737 BRI0025	AJ477003	BRI1031	BRI105	BRI0028	AV74289	W739964	AJ407770											AL837413	10300796			CWRmt 3 CDT	SWI.4CA	SWC	SE	ro i	SH	~ '	SWL4CAKO

ALIGNMENTS

FEATURES Source		AUTHORS TITLE JOURNAL COMMENT	REFERENCE	VERSION KEYWORDS SOURCE ORGANISM	AU16/182/c LOCUS DEFINITION ACCESSION
Location/Qualifiers 1. 304 /organism="Oryzias latipes" /strain="HNI"	Genome Research Group National Institute of Radiological Sciences Anagawa 4-9-1, Inage, Chiba 263-8555, Japan Email: kmitaenirs.go.jp method:uni-directional sequence direction:sequenced from T3 primer (5' -> 3')	Mita,K., Ishikawa,Y. and Yamauchi,M. Establishment of cDNA database of medaka, Oryzias latipes Unpublished (2001) Contact: Mita K	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Beloniformes; Adrianichthyidae; Oryziinae; Oryzias. 1 (bases 1 to 304)	AU167182.1 GI:12589251 EST Japanese medaka. Oryzias latipes	AU167182 304 bp mRNA linear EST 29-JAN-2001 AU167182 Ol-br-ad cDNA Oryzias latipes cDNA clone br0230, mRNA sequence. AU167182

```
RESULT 3
BG139700/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
                 DEFINITION
                                                                                           밁
                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
BM141055
                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                           Matches
                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                         COUNT
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ьоса1
                                                                                       1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCGACGGTATCGATAAGCTTGATATCGAATTCGTCGA 267
BG139700
EST480142 wild tomato |
CLPP13P12 5' sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Zhlyuan Gong
School of Biological Sciences
National University of Singapore
Lower Kent Ridge Road, Singapore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (2002)
Contact: Zhiyuan G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Actinopterygii; Neopterygii; Syprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                  Tel: 65-8742860
Fax: 65-7792486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zeng, S. and Gong, Z.
Zebrafish EST clones from testis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Danio rerio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM141055
ZFO441 Zebrafish Ovary Danio
                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      zebrafish
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 818)
                                                                                                                                                                                                        255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106
                                                                                                                                         19.1%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.2%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                        cloning
a 196
                                                                                                                                                                                                                                      /dev_stage="4-5 month-old female adult fish" (note-"Organ: Ovary; Vector: Lambda Uni-ZAP XR; Site_1: EcoRI; Site_2: XhoI; Poly A+ RNA was isolated from the ovaries of 2 female adult zebrafish of 4-5 month-old and the cDNAs were made using oligo dT primers and inserted into lambda ZAP vector at EcoRI (5'-cDNA) and XhoI
                                                                                                                                                                                                 (3'-cDNA) sites using Stratagene's Lambda Uni-ZAP XR
Cloning system."
196 c 175 g 189 t 3 others
                                                                                                                                                                                                                                                                                                                       /clone_lib="Zebrafish Ovary"
/sex="female"
                                                                                                                                                                                                                                                                                                                                               /organism="Danio rerio"
/db_xref="taxon:7955"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="female/male mixed"
/tissue_type="brain"
/dev_stage="adult"
95 c 54 g 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:8090"
/clone="br0230"
/clone_lib="Ol-br-ad cDNA"
                                                                                                                                                                                                                                                                                                                                                                         .818
                                                                                                                                       Score 36; DB; Pred. No. 2.8
                                                                                                                                          0;
495 bp mRNA pollen Lycopersicon , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              releostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp
rerio
                                                                                                                                                   DB 13;
2.8e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 9; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA linear EST 30 cDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata; Eu
Ostariophysi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 304;
                                                                                                                                                               Length 818;
             pennellii
                           linear
                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA libraries
             EST 31-JAN-2001 CDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cypriniformes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-2002
                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                               RESULT 4
BM351825
                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                   TERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                               TITLE
                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                  3
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 9
                                                                             D-305 Fairchild Building, 300 Pasteur Drive
Tel: 650 723 7296
Fax: 650 723 6853
                                                                                                                                  Eukaryotic Cell 1 (3), 329-340
Contact: Upinder Singh
Microbiology and Immunology
Stanford University
                                                                                                                                                                                                                                               1 (bases 1 to 919)
Cleary,M.D., Singh,U., Blader,I.J., Brewer,J.L. and Boothroyd,J.C.
Toxoplasma gond11 asexual development: identification of
                                                                                                                                                                                                                                                                                                                                                                                                                                       BM351825 919 bp mRNA linear EST: Tgzz44h01.sl TgME49 invivo Bradyzoite cDNA size selected gondii cDNA clone Tgzz44h01.sl 5', mRNA sequence.
High quality sequence start: High quality sequence stop:
                                       Email: usingh@stanford.edu
Seq primer: T7
                                                                                                                                                                                                                                 developmentally regulated
                                                                                                                                                                                                                                                                                                        Toxoplasma gondii
Eukaryota; Alveolata; Apic
Sarcocystidae; Toxoplasma.
                                                                                                                                                                                                               expression
                                                                                                                                                                                                                                                                                                                                                                                                         BM351825.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   van der Hoeven,R., Bezzerides,J., Sun,H.,
Hansen,C., Ronning,C. and Tanksley,S.
Generation of ESTs from wild tomato (L. p
                                                                                                                                                                                                                                                                                                                                                                Toxoplasma gondii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clemson University Genomics Institute Clemson University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2001)
Contact: CUGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG139700
BG139700.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lycopersicon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lycopersicon pennellii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 495)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jordan Hall, Clemson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ordan Hall, Clemson, SC 29634, USA
http://www.genome.clemson.edu/orders/index.html.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Vector: pBluescript SK(-); Site_1: EcoR1; Si
Xhol; Pollen was collected from open flowers from
L.pennellii TA56, and stored at -80 C until library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     construction."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="pollen collected from
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="wild tomato pollen"
/tissue_type="pollen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:28526"
/clone="cLPP13P12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Lycopersicon
/cultivar="TA56"
                                                                                                                                                                                                                                                                                                                                                                                                       GI:18084183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:12639888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pennellii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18.6%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 35; DB; Pred. No. 8.7; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                            Apicomplexa; Coccidia; Eimeriida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104 g
                                                                                                                                                                                                                               genes
 700
                                                                                                                                                                                           (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131 t
                                                                                                                                                                                                                                 and distinct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 12;
8.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pennellii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (L. pennellii)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cho, J., Utterback, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                open
                                                                                                                  Stanford,
                                                                                                                                                                                                                               patterns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                flowers'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                             ၀ှင်
                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                94305, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
BM351824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D-305 Fairchild Building, 300 Pasteur Drive Stanford, CA 94305, USA
Tel: 650 723 7296
Fax: 650 723 6853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cleary,M.D., Singh,U., Blader,I.J., Brewer,J.L. and Boothroyd,J.C. Toxoplasma gondii asexual development: identification of developmentally regulated genes and distinct patterns of gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM351824 945 bp mRNA linear EST 29-JUL-2002 Tgzz40hll.sl TgME49 invivo Bradyzoite cDNA size selected Toxoplasma gondil cDNA clone Tgzz40hll.sl 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Upinder Singh Microbiology and Immunology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Toxoplasma gondii
Eukaryota; Alveolata; Apicomplexa; Coccidia; Eimeriida;
                                                                                                                                                                                                                                                                                                                          Email: usingh@stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotic Cell 1 (3), 329-340 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Toxoplasma gondii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM351824.1 GI:18084182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sarcocystidae; Toxoplasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POLYA-Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 945)
                                                                                                                                                                                                                                                                                                   primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                       ford University
                                                                                                                                                                                                                                                     quality sequence start: 20 quality sequence stop: 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.6%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"vector: Bluescript II SK-; Site_1: EcoRI; Site_2:
NotI; Mature bradyzoites were obtained from infected mouse
brains by percoll density centrifugation. The original
library was constructed by Steve Parmley, Palo Alto
Medical Foundation. cDNAs were synthesized by priming with
oligo d(T) and directionally cloned into the EcoRI/NotI
sites of lambda gtll. Warning: the library contains a
small percentage of host cDNAs derived from mouse cells.
Inserts from this cDNA library were excised with Notl and
EcoRI, size selected in a range of 0.7 - 2.0 kb and
subcloned into Bluescript II SK- (Adrian Hehl, Ian Manger
and John Boothroyd, Stanford University)"
17 a 219 c 232 g 231 t 20 others
                                                                                                                                     /organism="Toxoplasma gondii"
/strain="ME49"
                                                                                                                                                                                                        Location/Qualifiers
                       /dev_stage="Bradyzoite"
/lab_host="DH10"
                                                                  /clone-"Tgzz40h11.s1"
/clone-lib-"TgME49 invivo Bradyzoite cDNA size selected"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="Tgzz44h01.s1"
/clone_llb="TgME49 invivo Bradyzoite cDNA size selected"
                                                                                                                  'db_xref="taxon:5811"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'dev_stage="Bradyzoite"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Toxoplasma
/strain="ME49"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       xref="taxon:5811"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 35;
Pred. No.
  Bluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gondii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; I
8.6e-07;
hes 0;
II SK-; Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
BM351823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryotic Cell 1 (3), 329-340 (2002)
Contact: Upinder Singh
Microbiology and Immunology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cleary,M.D., Singh,U., Blader,I.J., Brewer,J.L. and Boothroyd,J.C. Toxoplasma gondii asexual development: identification of developmentally regulated genes and distinct patterns of gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1300 bp mRNA בונכם. ביי Tyzz40d09.s1 TyME49 invivo Bradyzoite cDNA size selected Toxoplasma Tyzz40d09.s1 5' end sequenced, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence start: 50 High quality sequence stop: 750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D-305 Fairchild Building, 300 Pasteur Drive Stanford, CA 94305, USA
Tel: 650 723 7296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sarcocystidae; Toxoplasma.

1 (bases 1 to 1300)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Alveolata; Apicomplexa; Coccidia; Eimeriida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Toxoplasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM351823.1 GI:18084181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 650 723 6853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Toxoplasma gondii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  il: usingh@stanford.edu
primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18.6%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
Note "Vector: Bluescript II SK-; Site_1: EcoRI; Site_2: NotI; Mature bradyzoites were obtained from infected mouse brains by percoll density centrifugation. The original library was constructed by Steve Parmley, Palo Alto Medical Foundation. CDNAs were synthesized by priming with oligo d(T) and directionally cloned into the EcoRI/NotI sites of lambda gfl1. Warning: the library contains a small percentage of host cDNAs derived from mouse cells. Inserts from this cDNA library were excised with Notl and EcoRI, size selected in a range of 0.7 - 2.0 kb and subcloned into Bluescript II SK- (Adrian Hehl, Ian Manger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   brains by percoil density centrifugation. The original library was constructed by Steve ParmLey, Palo Alto Medical Foundation. CDNAs were synthesized by priming with oligo d(T) and directionally cloned into the EcoRI/NotI sites of lambda gtll. Warning: the library contains a small percentage of host cDNAs derived from mouse cells. Inserts from this cDNA library were excised with Notl and EcoRI, size selected in a range of 0.7 - 2.0 kb and subcloned into Bluescript II SK- (Adrian Hehl, Ian Manger and John Boothroyd, Stanford University) and 182 c 266 g 261 t 37 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                       /dev_stage="Bradyzoite"
/lab_host="DH10"
                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Toxoplasma gondii"
/strain="ME49"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NotI; Mature bradyzoites were obtained from infected mouse
                                                                                                                                                                                                                                                                                                                                                      'clone="Tgzz40d09.s1"
'clone_lib="TgME49 invivo Bradyzoite cDNA size selected"
                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:5811"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gondii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 13; 1
. 8.6e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

and John Boothroyd, Stanford University)"

밁

```
RESULT 8
AW042087/c
                                                                                                                                                                                 Ş
                   ACCESSION
                                                   DEFINITION
                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                     rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AW172124/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                    3
                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GTCGACGGTATCGATAAGCTTGATATCGAATTCGT 35
                                                                                                                                               GICGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCGACGGTATCGATAAGCTTGATATCGAATTCGT
               AW042087 53 bp mRNA linear EST 15-SEP-199 SWL4CAK03G05SK Brugia malayi L4 cDNA (SAW99MLW-BmL4) Brugia malayi cDNA clone SWL4CAK03G05 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith College Department of Biological Sciences Department of Biological Sciences, Clark Science College, Northampton, MA, 01063, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Steven A. Wil Molecular Parasitology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genes expressed in fourth stage larvae Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW172124

52 bp mRNA linear EST 15-NOV-199
SWL4CAK07B01SK Brugia malayi L4 cDNA (SAW99MLW-BmL4) Brugia malayi
cDNA clone SWL4CAK07B01 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams, S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brugia malayi.
Brugia malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 Similarity
35; Conser
                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: genome@smith.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fax: 4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Onchocercidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Nematoda; Chromadorea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: pBluescript SK.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 52)
                                                                                                                                                                                                                  18.1%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         284
                                                                                                                                                                                                                                                                                                                  /clone-lib-Brugla malayi L4 cDNA (SAW99MLW-BmL4)"
/dev_stage-"larval stage four"
/lab_host-"XL1-Blue MRF/"
/lab_host-"XL1-Blue MRF/"
/lab_host-"XL1-Blue MRF/"
/lab_host-"XL1-Blue MRF/"
/note-"vector: Lambda Uni-ZAP XR; Site_1: Eco RI; Site_2:
Xho I; Lymphatic filarial nematode parasite of humans.

mRNA was prepared from L4s isolated from the peritoneal cavity of jirds and converted to double-stranded cDNA using reverse transcriptase and oligo(dT) followed by RNase H and DNA pol I. The library has 2.7 x 105 independent recombinants and the average insert size is approx. 1050bp. The library was constructed by Michelle Lizotte-Waniewski. The library is available from Dr. S.A. Williams, email:genome@neal.smith.edu."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                    Williams, email:genome@neal.smith.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="SWL4CAK07B01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Brugia malayi"
/db_xref="taxon:6279"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:6431920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brugia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Williams
                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                  Score 34;
Pred No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     316
                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     290
                                                                                                                                                                                                                DB 10; 1
2.8e-06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13;
8.6e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clark Science Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of Brugia malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114 others
                                                                                                                                                                                                                                                Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                 EST 15-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 15-NOV-1999
                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                  AW626527/c
LOCUS
                                                                                               COMMENT
                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                               ORGANISM
                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
Unpublished (1995)
Unpublished (1995)
Contact: Steven A. Williams
Molecular Parasitology
Smith College Department of Biological Sciences
Department of Biological Sciences, Clark Science Center,
                                                                                                                                                                                                                                                                                                                                SWOVL3CAN65A075K Onchocerca volvulus (SAW94WL-OVL3) Onchocerca volvulus cE
                                                                                                                             volvulus
                                                                                                                                          Genes expressed
                                                                                                                                                             Williams, S.A.,
                                                                                                                                                                                                                             Onchocerca volvulus
                                                                                                                                                                                             Onchocercidae; Onchocerca.
                                                                                                                                                                                                           Eukaryota;
                                                                                                                                                                                                                                              Onchocerca volvulus.
                                                                                                                                                                                                                                                                                AW626527.1
                                                                                                                                                                                                                                                                                                  AW62652
                                                                                                                                                                                                                                                                                                           mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                   AW626527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: genome@smith.edu
Seq primer: pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      College, Northampton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith College Department of Biological Sc
Department of Biological Sciences, Clark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Molecular Parasitology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Steven A. Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genes expressed in fourth stage larvae Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Williams, S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brugia malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW042087.1 GI:5900919
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Nematoda; Chromadorea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brugia malayi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                             .aryota,
chocercidae;
chases 1 to 53)
'ams,S.A., Lu,W., I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4135853826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="SWL4CAK03G05"
/clone=lib="Brugia malayi L4 cDNA (SAW99MLW-BmL4)"
/dev_stage="larval stage four"
/lab_host="XL1-Blue MRF'".
/note="Yector: Lambda Un1-ZAP XR; Site_1; Eco.RI; Site_2:
Xho I; Lymphatic filarial nematode parasite of humans.
mRNA was prepared from L4s isolated from the peritoneal
cavity of jirds and converted to double-stranded cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      using reverse transcriptase and oligo(dT) followed by RNase H and DNA pol I. The library has 2.7 x 105 independent recombinants and the average insert size is approx. 1050bp. The library was constructed by Michelle Lizotte Wanlewski. The library is available from Dr. S.A. Williams, email:genome@neal.smith.edu."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ∕organism-"Brugia malayi"
                                                                                                                                                                                                         Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                              GI:7342392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brugia.
                                                                                                                                           infective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 34;
Pred. No.
                                                                                                                                        Lizotte-Waniewski,M. and Laney,S.J.
fective third stage larvae of Onchocerca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MA, 01063,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                53
                                                                                                                                                                                                                                                                                                                                                                ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                            cDNA clone SWOvL3CAN65A07 5',
                                                                                                                                                                                                                                                                                                                                                infective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sciences
rk Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Brugia malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 53
                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                larva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center,
                                                                                                                                                                                                                                                                                                                                                              EST, 30-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                        Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith
```

밁 Ş

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW172172/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54 bp mRNA linear EST 15-NOV-199
SWL4CAK07G03SK Brugia malayi L4 cDNA (SAW99MLW-BmL4) Brugia malayi
CDNA clone SWL4CAK07G03 5', mRNA sequence.
AW172172
AW172172.1 GI:6431968
                                                                                                                                                                                                                                                                                                                                                                                                                          Smith College Department of Biological Sciences Department of Biological Sciences, Clark Science Center, College, Northampton, MA, 01063, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genes expressed in fourth stage
Unpublished (1999)
Contact: Steven A. Williams
                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 4135853826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brugia malayı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecular Parasitology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams, S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Onchocercidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: 4135853786
Email: genome@s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 54)
                                                                                                                                                                                                                                                                                                                                     primer: pBluescript
                                                                                                                                                                                                                                                                                                                                                                                        4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="vector: lambda UniZap XR; Site_1: EcoR I; Site_2: Xho I; Cutaneous filarial nematode parasite of humans. mRNA was prepared from third stage infective larvae of Onchocerca volvulus isolated from mosquitoes 10 days after infection and converted to double stranded cDNA using reverse transcriptase and oligo(dT) followed by RNase H and DNApol I. The library had 1.8 x 10E5 independent recombinants and average insert size was 900 base pairs. The library was constructed by Wenhong Lu. The library is available from Dr. S.A. Williams, email genome@smith.edu." 11 a 15 c 11 g 16 t
                                                                                                                                                                                                                                                                                                                                                              genome@smith.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          genome@smith.edu
/Clone_lib="Brugia malayi L4 cDNA (SAW99MIW-BmL4)"
/dev_stage="larval stage four"
/lab_host="XL1-Blue MRF'"
/note="Vector: Lambda Uni-ZAP XR; Site_1: Eco RI; Site_2:
/note="Vector: Lambda Uni-ZAP XR; Site_1 be parasite of humans.
The I; Lymphatic filarial nematode parasite of humans.
MRNA was prepared from L4s isolated from the peritoneal cavity of jirds and converted to double-stranded cDNA using reverse transcriptase and oligo(dT) followed by RNase H and DNA pol I. The library has 2.7 x 105
                                                                                                                                                                                                                   /clone="SWL4CAK07G03"
                                                                                                                                                                                                                                           /organism="Brugia malayi"
/db_xref="taxon:6279"
                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAW94WL-OVL3)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'clone_lib="Onchocerca volvulus infective larva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone-"SWOvL3CAN65A07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="Sierra Leone"
/db_xref="taxon:6282"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Onchocerca"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     host="XL1-Blue MRF'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                          SK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             volvulus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            larvae of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 10; I
2.8e-06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brugia malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 15-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

В ş

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
BE758345/c
LOCUS
                                                                                                                                        ORIGIN
                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                 Best
                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
43
                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                         1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: pBluescript SK.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith College Department of Biological Sciences Department of Biological Sciences, Clark Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Steven A. Wil Molecular Parasitology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brugia malay:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWYACAL08D01SK Brugia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: genome@smith.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               College, Northampton, Tel: 4135853826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genes expressed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams, S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Onchocercidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE758345.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brugia malayi cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE758345
                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1
                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                               /note-"vector: Lambda Uni-ZAP XR; Site_1: Eco RI; Site_2: Xho I; Lymphatic filarial nematode parasite of humans. mRNA was prepared from young adult worms isolated from the peritoneal cavity of jirds and converted to double-stranded cDNA using reverse transcriptase and oligo(dT) followed by RNase H and DNA pol I. The library has 6.5 x 104 independent recombinants and the average insert size is approx. 800bp. The library was constructed by Michelle Lizotte-Waniewski. The library is available from Dr. S.A. Williams, email: genome@neal.smith.edu." a 15 c 11 g 17 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           independent recombinants and the average ins approx. 1050bp. The library was constructed Lizotte-Waniewski. The library is available Williams, email:genome@neal.smith.edu." a 15 c 11 g 17 t
                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:6279"
/clone="SWYACAL08D01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Brugia malayi"
                                                                                                                                                                                                                                                                                                                                            'lab_host="XL1-Blue MRF'"
                                                                                                                                                                                                                                                                                                                                                                dev_stage="young adult"
                                                                                                                                                                                                                                                                                                                                                                                                 clone_lib="Brugia malay1 young adult cDNA (SAW99MLW-BmYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Metazoa; Nematoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to 54)
                                                          18.1%; 500
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:10172337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.1%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brugia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   young adult of Brugia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone
                                                                               Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
malayi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 34;
Pred. No.
                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54 bp mRNA linear EST 16-FEB-2001 layi young adult cDNA (SAW99MLW-BmYA) SWYACAL08D01 5', mRNA seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01063,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chromadorea; Spirurida;
                                                                               DB 12;
2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10;
2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clark Science Center, Smith
                                                                                                Length 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               insert size is
ted by Michelle
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from Dr. S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Filarioidea;
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

RESULT 12

밁 Š

```
REFERENCE
AUTHORS
                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                  RESULT 13
AW159927/c
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                    VERSION
                                                                                                                                                                                                                      FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW626545/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                      1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                   GTCGACGGTATCGATAAGCTTGATATCGAATTCG
                                                                                                                                    EST.
                                                                                                                                                                AW159927
SWL4CAKV4D11SK Brugia malayi L4 c
cDNA clone SWL4CAK04D11 5', mRNA
AW159927
Genes expressed in 
Unpublished (1999)
                                 Williams, S.A.
                                                                                Brugia malayi.
Brugia malayi
Eukaryota; Metazoa;
                                                                                                                                                AW159927.1 GI:6271956
                                                                    Onchocercidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith College Department of Biological Sciences Department of Biological Sciences, Clark Science College, Northampton, MA, 01063, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AW626545
SWOVLJCAN65F045K Onchocerca volvulus infective larva cDNA SWOVLJCAN65F045K Onchocerca volvulus cDNA clone SWOVLJCAN65F04 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: genome@smith.edu
Seq primer: pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shinatoa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Williams, S.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Onchocerca volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA sequence.
AW626545
                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Molecular Parasitology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Steven A. Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genes expressed in infective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW626545.1 GI:7342410
                                                (bases 1 to 68)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 66)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xho I; Cutaneous filarial nematode parasite of humans.

mRNA was prepared from third stage infective larvae of Onchocerca volvulus isolated from mosquitoes 10 days after infection and converted to double stranded cDNA using reverse transcriptase and oligo(dr) followed by RNase H and DNApol I. The library had 1.8 x 1055 independent recombinants and average insert size was 900 base pairs. The library was constructed by Wenhong Lu. The library is available from Dr. S.A. Williams, email genome@smith.edu."

a vailable from Dr. S.A. Williams, email genome@smith.edu."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="SWOvL3CAN65F04"
/clone_11b="Onchocerca volvulus infective
(SAW94WL-OVL3)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="Sierra Leone"
/db_xref="taxon:6282"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="XL1-Blue MRF'"
/note="Vector: lambda UniZap XR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Onchocerca volvulus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                   18.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lu,W.,
               fourth stage larvae of Brugia malayi
                                                                                 Nematoda;
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                  Score 34; DB Pred. No. 2.8 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lizotte-Waniewski, M. and Laney, S.J. fective third stage larvae of Onchocerca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SK.
                                                                            Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
. 2.8e-06;
                                                                                                                                                                                               cDNA (SAW99MLW-BmL4)
                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                sequence.
                                                                                                                                                                                                                                                                                                                                                                                                   Length 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Site_1: EcoR I; Site_2:
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       larva
                                                                                                                                                                                                                 EST 05-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 30-MAR-2000
                                                                                                                                                                                               Brugia
                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith
                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                              JOURNAL COMMENT
                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AI066878/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43
                                                                                                                                                                                                                                                                                                                                                                                                                  EST
```

```
Dukaryota, .....Onchocercidae; Brugia.
1 (bases 1 to 91)
1 saunders,L. and Williams,S.A.
Saunders,L. and Upregulated Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI066878
SWBmL3SDI03H08SK
(SAW97LS-BmL3SD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Steven A. Williams
Molecular Parasitology
Smith College Department of Biological Sciences
Department of Biological Sciences, Clark Science Center, Smith
College, Northampton, MA, 01063, USA
Tel: 4135853826
                                                                                                                                                                                                                  Smith College Department of Biological Sc
Department of Biological Sciences, Clark
College, Northampton, MA, 01063, USA
Tel: 4135853826
                                                                                                                                                                                                                                                                                                                                              Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brugia malayi
Eukaryota; Metazoa;
                                                                                                                                                                        Fax: 4135853786
Email: genome@smith.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brugia malayi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: genome@smith.edu
Seq primer: pBluescript
                                                                                                                                                                                                                                                                                                      Molecular Parasitology
                                                                                                                                                                                                                                                                                                                          Contact: Steven A. Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                    Brugia malay
                                                                                                                                                    primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-"Vector: Lambda Uni ZAP XR; Site_1: Eco RI; Site_2: Xho I; Lymphatic filarial nematode parasite of humans. mRNA was prepared from L4s isolated from the peritoneal cavity of jirds and converted to double-stranded cDNA using reverse transcriptase and oligo(dT) followed by RNASE H and DNA pol I. The library has 2.7 x 105 independent recombinants and the average insert size is approx. 1050bp. The library was constructed by Michelle Lizotte-Waniewski. The library is available from Dr. S.A. Williams, email:genome@neal.smith.edu."
/clone="SWBmL3SDI03H08"
/clone_lib="Brugia malayi L3
(SAW97LS-BmL3SD)"
                                                                /organism="Brugia malayi"
/db_xref="taxon:6279"
                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_llb="Brugia malayi L4 cDNA (SAW99MLW-BmL4)"
/dev_stage="larval stage four"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'lab_host="XL1-Blue MRF'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone="SWL4CAK04D11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'organism="Brugia malayi"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91 bp mRNA linear EST 3
Brugia malayi L3 subtracted cDNA.library
Brugia malayi cDNA clone SWBmL3SDI03H08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chromadorea;
                                                                                                                                                                                                                                                                                                                                                                                   Expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10; I
                          subtracted
                                                                                                                                                                                                                                                                             Sciences
                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                         Science Center, Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Spirurida;
                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                   Third Stage Larvae
                        cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 31-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA680557/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA680557

92 bp mRNA linear EST 04-DEC-1
SWOVL3CAN03D08SK Onchocerca volvulus infective larva cDNA
(SAW94WL-OvL3) Onchocerca volvulus cDNA clone SWOVL3CAN03D08 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecular Parasitology
Smith College Department of Biological Sciences
Department of Biological Sciences, Clark Science Center, Smith
College, Northampton, MA, 01063, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1995)
Contact: Steven A. Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Onchocercidae; Onchocerca.

1 (bases 1 to 92)

Williams, S.A., Lu, W., Lizotte-Waniewski, M. and Laney, S.J.
Genes expressed in infective third stage larvae of Onchocerca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Onchocerca volvulus
Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA680557
AA680557.1 GI:2661307
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: pBluescript SK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: 4135853786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Onchocerca volvulus.
           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : genome@smith.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="L3 cDNA subtracted with microfilaria, adult male and adult female cDNA libraries"
/lab_nost="XL1-Blue MRF'"
/note="Vector: Lambda ZAP II; Site_1: Eco RI; Site_2: Eco RI; Lymphatic filarial nematode parasite of humans. cDNA from L3, microfilaria, adult male and adult female libraries was isolated and amplified by PCR using T3 and T7 primers. Microfilaria, adult male and adult female cDNA was subtracted from L3 cDNA using the PCR-select cDNA subtraction kit (Clontech). The library had 4.0 x 105 independent recombinants and the average insert size is -500bp. The library was constructed by Lori Saunders. The library is available from Dr. Steven A. Williams, email: genome@smith.edu"
20 a 26 c 23 g 22 t
/note-"Vector: lambda Unizap XR; Site_1: EcoR I; Site_2: XhO I; Cutaneous filarial nematode parasite of humans. mRNA was prepared from third stage infective larvae of Onchocerca volvulus isolated from mosquitoes 10 days after infection and converted to double stranded cDNA using reverse transcriptase and oligo(dT) followed by RNase H and DNApol I. The library had 1.8 x 10E5 independent recombinants and average insert size was 900 base pairs. The library was constructed by Wenhong Lu. The library is available from Dr. S.A. Williams, email genome@smith.edu." a valiable from Dr. S.A. Williams, email genome@smith.edu."
                                                                                                                                                                                                                                                                                                                                                                                                 /strain="Sierra Leone"
/db_xref="taxon:6282"
/clone="SWOVL3CAN03D08"
                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Onchocerca volvulus infective larva cDNA
(SAW94WL-OvL3)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Onchocerca volvulus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                       lab_host="XL1-Blue MRF'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.1%; Score 34; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

BASE COUNT

FEATURES

COMMENT

REFERENCE

AUTHORS

TITLE JOURNAL

KEYWORDS

밁

ORIGIN

Matches

```
ORIGIN
```

Query Match
Best Local Similarity
Matches 34; Conserv 18.1%; Score 34; ilarity 100.0%; Pred. No. Conservative 0; Mismatc 0; Mismatches DB 9; I Length 92; 0

0,

밁 Ş 41 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 1 GTCGACGGTATCGATAAGCTTGATATCGAATTCG 34

Search completed: February 19, 2003, 08:29:42 Job time: 1953 secs